# Aspire L100

## Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw

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# Revision History

Please refer to the table below for the updates made on Aspire L100 service guide.

| Date | Chapter | Updates |
|---|---|---|
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## Conventions

The following conventions are used in this manual:

| | |
|---|---|
| **Screen messages** | Denotes actual messages that appear on screen. |
| **NOTE** | Gives bits and pieces of additional information related to the current topic. |
| **WARNING** | Alerts you to any damage that might result from doing or not doing specific actions. |
| **CAUTION** | Gives precautionary measures to avoid possible hardware or software problems. |
| **IMPORTANT** | Reminds you to do specific actions relevant to the accomplishment of procedures. |

# Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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# System Specifications

## Overview

Aspire L100 series is highly integrated desktop for the customers. If you wnat a simple, small size, not expensive working platform. Aspire L100 is definately one of the best choices for you.

AMD mobile Athlon 64x2 and Sempron processor enable this product working with less power consumption:only 62W. This exactly shows Acer's endavor to enviroment protection. AcerPower integrates nVidia C51PV/G that supports 475/425 MHz graphics core speed, DVI output and directX-9 high level specification.

# Features

### CPU

- Socket Type : AMD Socket AM2 (940 pin)
- Supports AMD mobile Athlon 64 (62W) M2
- Supports AMD Sempron-D (62W) M2
- L2 Cache varies with CPU

### Chipset

- Northbridge: nVidia C51PVG
- Southbridge: nVidia MCP51

### Memory

- Socket Type : DDR II so-DIMM,1.8 Voltage
- Socket Quantity : 2
- Capacity support : 256MB ~ 2GB, support dual channel
- Support Memory Speed : DDR II 533/667 MHz

### Graphic Solution

- Intel Lakeport-G on-die graphic solution
- PCI-E x16 VGA Add-On Card

### Mini PCI Slot

- Slot Type: PCI 2.3 slot
- Slot Quantity: 1 (for TV tuner card)

### PATA IDE

- Slot Type : 40pin PATA IDE slot
- Slot Quantity : 1
- Transfer rate support PIO mode 0 (3.33MB/s) /1 (5.22MB/s) /2 (8.33MB/s) /3 (11.1MB/s) / 4 (16.7MB/s)
- ATA mode : 33/66/100/133
- Device Type Support : DVD-ROM/Combo/DVD Dual/DVD supermulti

### SATA IDE

- Slot Type: SATA IDE slot
- Slot Quantity : 2
- Storage Type Support : HDD

## Audio

- Codec : Realtek ALC833
- Compliant with Microsoft's UAA (Universal Audio Architecture) support (rear only)
- 7.1+2 Channel Audio Support (ALC833 codec series provide 10 DAC channels that simultaneously suppport 7.1 soud playback, plus 2 channels of independent stereo sound output through the front panel stereo output).
- 16/20/24 bit S/PDIF-OUT supports 44.1K/48K/96K/192KHz sample rate; 16/20/24bit S/PDIF-IN supports 44.1K/48K/96KHz sample rate
- Reserved disable function on BIOS side. Default is enabled.

## LAN

- Controller : PCI-E Giga LAN chip with manageability function
- LAN Chip : Marvell 88E116
- Should be worked under 10/100/1000 Mbs environment
- Integrated 1.25 GHz SERDES  for 1000BASE-X fiber applic
- Reserved disabled function on both hardware & BIOS side. Default is enabled

**SERDES** : serializer/deserializer: a device that takes parallel data, such as an 8-bit signal, and converts it into a serial stream for transmission on a serial link. At the other end, it converts the serial data back to parallel.

## USB

- Controller : nVidia MCP51
- Connectors Quantity : 8
- 4 rear connectorsFour for front daughter board (Pin:2*5 )
- USB 2.0/1.1

## System LED Definition

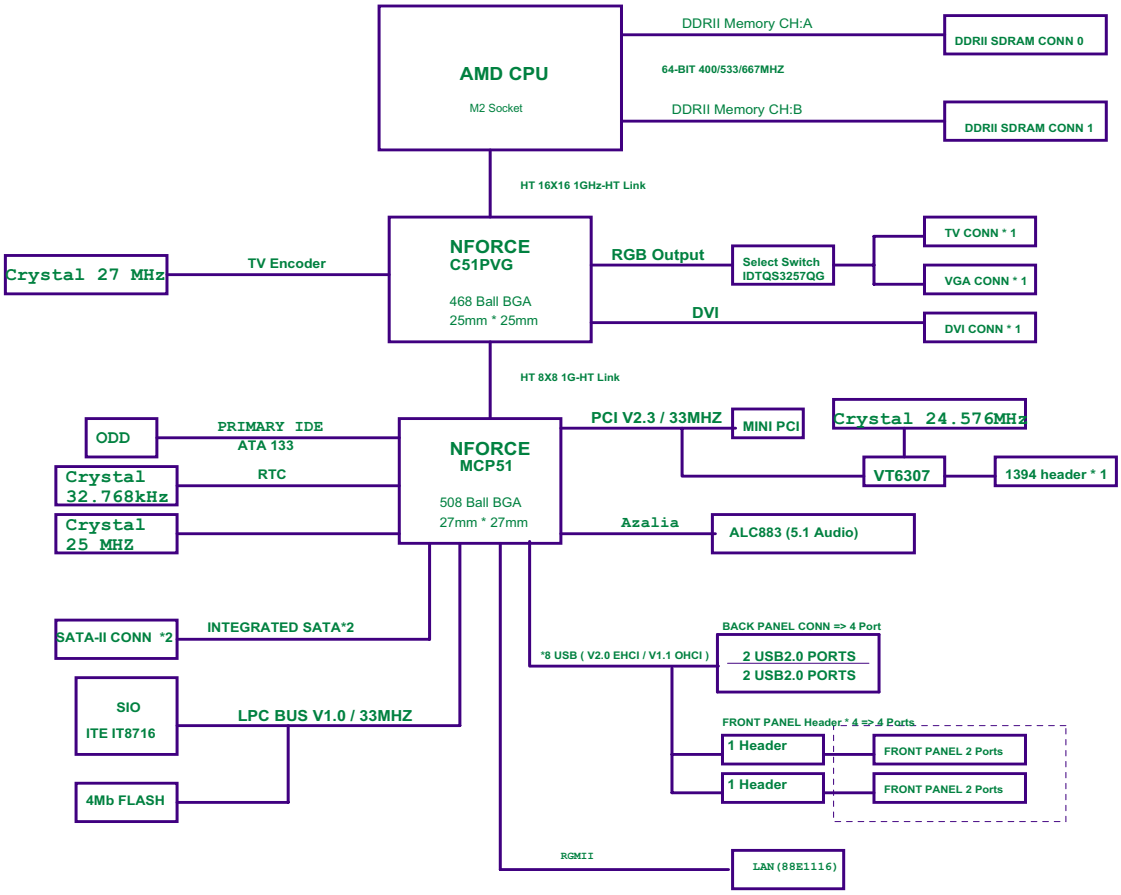
| Chasis | Bezel | Power LED | | | HDD LED | LAN LED | ODD LED |
|---|---|---|---|---|---|---|---|
| | | S0 | S1,S3 | S4,S5 | | | |
| H701 | V751 | Blue | Blue Blinking | OFF | Blue | Blue | Blue |
| H500 | H500 | Green | Green Blinking | OFF | Green | Green | N/A |
| H401 | V451 | Blue | Blue Blinking | OFF | Blue | Blue | Blue |
| | A451 | Blue | Blue Blinking | OFF | Blue | Blue | Blue |

## On-Board Connector

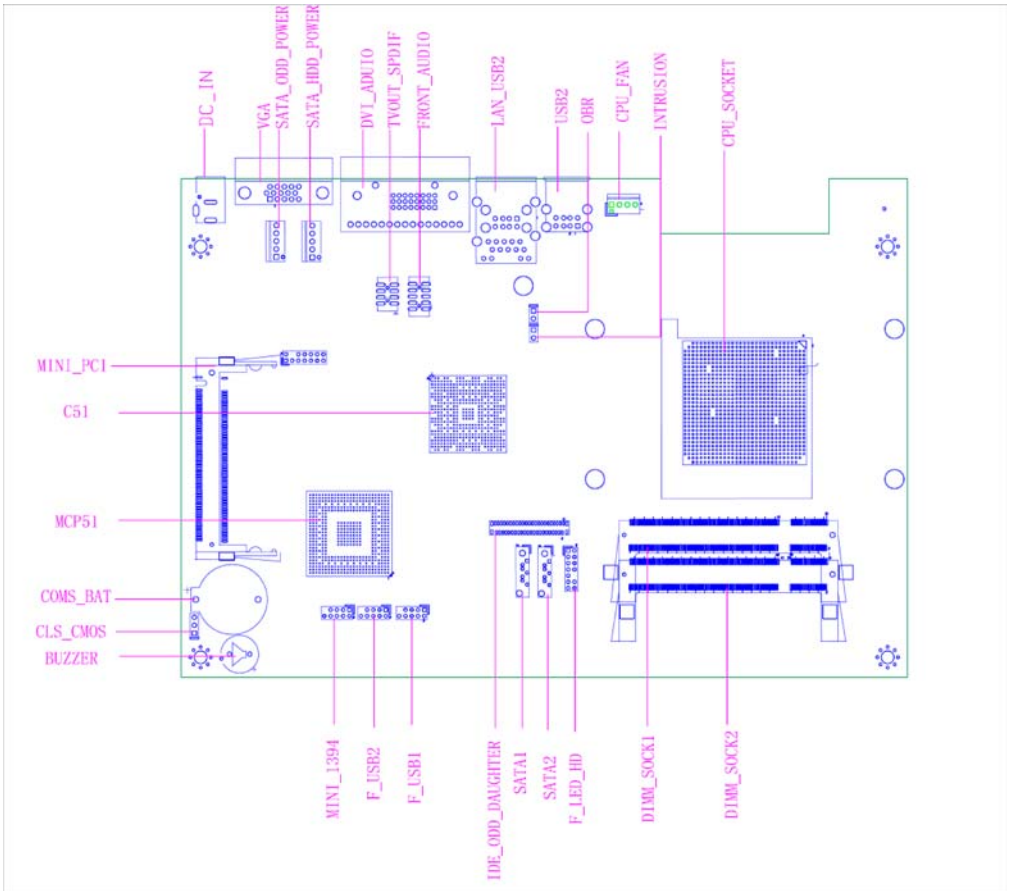
- Rear I/O Connectors
  - 1 D-sub (CRT) Port
  - 1 DVI Port
  - 1 GigaLAN Port
  - 4 USB Ports
  - 3 Ports Jack
  - 1 19V DC-in Jack
  - 1 IEEE 1394 port
- On-Board Connectos
  - 1 CPU Socket

- 2 Memory Socket
- 1 mini PCI Slot
- 1 PATA IDE Slot
- 2 SATA IDE ConnectorsPCI Express x1 Slot
- 2 2*5 pin Intel FPIO specification USB pin connectors (follow Intel FPIO standard specification)
- 1 2*5 front audio connnector
- 1 4 pin system FAN connector
- 1 2*7 Power/LED FPIO (follow Intel FPIO spec.)

# System Block Diagram



# Main Board Layout




| | | | | | |
|---|---|---|---|---|---|
| 1 | DC_IN | DC IN Connector | 15 | C51 | Nvidia C51 NorthBridge |
| 2 | VGA | VGA Connector | 16 | MCP51 | Nvidia MCP51 SouthBridge |
| 3 | SATA_ODD_POWER | SATA ODD power Header | 17 | COMS_BAT | COMS Battery Holder |
| 4 | SATA_HDD_POWER | SATA HDD power Header | 18 | CLS_CMOS | Clear COMS Header |
| 5 | DVI_ADUIO | DVI and Audio Connector | 19 | BUZZER | System BUZZER |
| 6 | TVOUT_SPDIF | TV OUT and SPDIF Header | 20 | MINI_1394 | Mini-1394 Header |
| 7 | FRONT_AUDIO | Front Audio Header | 21 | F_USB2 | Front USB*2 Header |
| 8 | LAN_USB2 | LAN and USB*2 Conncetor | 22 | F_USB2 | Front USB*2 Header |
| 9 | USB2 | USB*2 Connector | 23 | IDE_ODD_DAUGHTER | IDE ODD Connector |
| 10 | OBR | One Bottom Recovery header | 24 | SATA1 | SATA Header |
| 11 | CPU_FAN | CPU Fan Connector | 25 | SATA2 | SATA Header |
| 12 | INTRUSION | Case Open header | 26 | F_LED_HD | Front LED Panel Header |
| 13 | CPU_SOCKET | AMD M-2 CPU Socket | 27 | DIMM_SOCK1 | DIMM_SOCK1 |
| 14 | MINI_PCI | Mini-PCI Connector | 28 | DIMM_SOCK2 | DIMM_SOCK2 |

# Your Acer Notebook tour

After knowing your computer features, let us show you around your new AcerPower computer.

## Front and rear panel

Your computer's front and rear panels consist of the following:

| Icon | Component | Icon | Component |
|---|---|---|---|
| | Eject button | DVI-D | DVI port |
| | Power button | | CRT/LCD monitor port |
| | Hard disk drive indicator | | OBR (One Button Recovery) button |
| | LAN indicator/ Network port | | Line-out jack |
| | USB ports | | Microphone-in jack |
| | Kensington lock | | Headphone/Speaker-out/line-out port |
| | DC-in jack | | Line-in jack |
| 1394 | IEEE 1394 port | PRO | Media card reader |
| FM | FM radio input jack | TV-OUT | S-video output jack (for selected models) |
| TV | V antenna/cable input jack | SPDIF | Coaxial digital audio output jack |
| AV-IN | A/V input connector | | |

**Audio Jack Function Table**

| Color/Use | Headphone | 1.1 CH | 3.1 CH | 5.1 CH | 7.1 CH |
|---|---|---|---|---|---|
| Blue | Line-in | Line-in | Line-in | Line-in | Line-in |
| Green | Headphone | Line-out | Front | Front | Front |
| Pink | Mic-in | Mic-in | Mic-in | Mic-in | Mic-in |
| Orange | Center&woofer | Center&woofer | Center&woofer | Center&woofer | Center&woofer |
| Black | Rear | Rear | Rear | Rear | Rear |
| Gray | Side | Side | Side | Side | Side |

# System Peripherals

The Aspire T630 and AcerPower F3 computer consist of the system itself, and system peripherals, like a mouse, keyboard and a set of speakers (optional). This section provides a brief description of the basic system peripherals.

## Mouse (PS/2 or USB, manufacturing option)

The included mouse is a standard two-button wheel mouse. Connect the mouse to the PS/2 mouse port or USB port on the back panel of the system.

## Keyboard (PS/2 or USB, manufacturing option)

Connect the keyboard to the PS/2 keyboard port or USB port on the back panel of the system.

## Speakers

For systems bundled with speakers, before powering on the system, connect the speaker cable to the audio out (external speaker) port on the back panel of the system.

For more detailed information about the speakers, please refer to the included operating instructions.

**NOTE:** speakers are optional and the appearance might be different depending on the actual product.

# Hardware Specifications and Configurations

### System Board Major Chip

| Item | Specification |
|---|---|
| System Core Logic | North bridge: nVidia C51PVG<br>South bridge: nVidia MCP51 |
| Super I/O Controller | ITE IT8716F |
| LAN Controller | PHY-88E116 |
| Memory Controller | Built-in CPU (AMD mobile Athlon 64 or AMD Sempron-D) |
| SATA/P-IDE Controller | Built-in nVidia MCP51 |
| RJ45 Controller | PHY 88E116 |
| Audio Controller | Realtek ALC833 |
| VGA Controller | Built-in nVidia G51PVG |
| Keyboard Controller | LPC47M182 |

### Processor

| Item | Specification |
|---|---|
| Type | Supports AMD mobile Athlon 64 (62W) M2<br>Supports AMD Sempron-D (62W) M2 |
| Slot | Socket 940 |
| Speed | Depends on CPU, which is local configured |
| Bus Frequency | 533/800/1066 MHz |
| Voltage | Processor voltage can be detected by any system without setting any jumper |

### BIOS

| Item | Specification |
|---|---|
| BIOS code programmer | Award |
| BIOS version | R01-A1 |
| BIOS ROM size | 4MB |
| BIOS ROM package | 32-pin PLCC package |
| Support protocol | PCIX 1.0,PCI 2.2,APM 1.2,VESA/DPMS (VBE/PM V1.1), SMBIOS 2.3, E-IDE 1.1, ACPI 1.0b,ESCD1.03, PnP 1.0a, Bootable CD-ROM 1.0, USB 1.1~ USB 2.0, UHCI 1.0, ANSI ATA 3.0 ATAPI |
| Boot from CD-ROM feature | Yes |
| Support to LS-120 drive | Yes |
| Support to BIOS boot block feature | Yes |
| BIOS Password Control | Yes |

The BIOS can be overwritten/upgraded by using “AFLASH” utility (AFLASH.EXE).

### BIOS Hotkey List

| Hotkey | Function | Description |
|---|---|---|
| c | Enter BIOS Setup Utility | Press while the system is booting to enter BIOS Setup Utility. |

### System Memory

| Item | Specification |
|---|---|
| Memory Slot Number | 2 Slots |
| Supported Memory Size per Slot | 256 MB ~ 1GB |
| Supported Maximum Memory Size | 2GB |
| Supported Memory Speed | 533/667 MHz |
| Supported memory voltage | 1.8 V |
| Support memory module package | 240-pin DIMM |
| Support to parity check feature | Yes |
| Support to Error Correction Code (ECC) feature | Yes |
| Memory module combinations | You can install memory modules in any combination as long as they match the above specifications. |

### VRM (Voltage Regulator Module)

| Function | VRM Specification | Typical Voltage | Power Source | Maximum Output |
|---|---|---|---|---|
| CPU VRM | VRM10.1 | 0.8375~1.6v | 12 Voltage | 101A |
| CPU VRM | VRM 9.0 | 1.1-1.85 Voltage | 12 Voltage | 70A |

### Cache Memory

| Item | Specification |
|---|---|
| First-Level Cache Configurations | |
| Cache function control | Enable/Disable by BIOS Setup |
| Second-Level Cache Configurations<br>The information below is only applicable to system installed with a Pentium 4 processor | |
| Tag RAM Location | On Processor |
| L2 Cache RAM Location | On Processor |
| L2 Cache RAM type | PBSRAM (Pipelined-burst Synchronous RAM) |
| L2 Cache RAM size | Depends on CPU, which is local configured |
| L2 Cache RAM speed | Full of the processor core clock frequency (Advanced Transfer Cache) |
| L2 Cache function control | Enable/Disable by BIOS Setup |
| L2 Cache scheme | Fixed in write-back |

### LAN Interface

| Item | Specification |
|---|---|
| LAN Controller | PHY-88E116 LAN Controllers |
| LAN Controller Resident Bus | PCI Bus |
| LAN Port | ONE RJ-45 on board |
| Function Control | Enable/Disable by BIOS Setup |

### IDE Interface

| Item | Specification |
|---|---|
| IDE Controller | Built-in nVidia MCP51 |
| IDE Controller Resident Bus | PCI bus |
| Number 40 pin PATA slot | 1 |
| q Device Type Support | HDD, CD-ROM, CD-RW, DVD-ROM,Combo,DVD burner |
| q Transfer Rate Support | PIO 0/1/2/3/4 |
| q ATA Mode | 33/66/100 |
| Number STAT IDE slot | 4 |
| q Device Type Support | HDD,CD-ROM,CD-RW,DVD-ROM,DVD-RW,DVD+RW,DVD Dual,DVD Supermultiplus |
| Supports LS-120 | Yes |
| Supports bootable CD-ROM | Yes |
| Function Control | Enable/Disable by BIOS setup |

### Serial Port (No serial port for this model)

| Item | Specification |
|---|---|
| Serial port controller | LPC47M182 |
| Serial port controller resident bus | LPC Bus |
| Number of serial port | 1 |
| Serial port location | Rear panel |
| 16550 UART support | Yes |
| Connector type | 9-pin D-type female connector |

### USB Port

| Item | Specification |
|---|---|
| Universal HCI | USB 2.0/1.1 |
| Controller | Built-in nVidia MCP51 |
| Number of the connectors | 8 |
| Location | Rear : 4<br>Front : 4 |
| USB Class | Support legacy keyboard for legacy mode |

### Wake-up Event Specifications

| Device | S1 | S3 | S4 | S5 |
|---|---|---|---|---|
| Power Button | Enabled | Enabled | Enabled | Enabled |
| PS2 Keyboard | Disabled | Disabled | Disabled | Disabled |
| USB Keyboard | Disabled | Disabled | N/A | N/A |
| PME | Disabled | Disabled | Disabled | Disabled |
| WOR (wake on Ring) | Disabled | Disabled | Disabled | Disabled |
| RTC (real time clock) | Disabled | Disabled | Disabled | Disabled |

### Thermal Design

| Item | Description |
|---|---|
| Thermal Design | q Provision for optional secondary fan<br>q Adequate venting in the front of chassis<br>q Adequate venting in the rear of chassis |

### Memory Address Map

| Address | Size | Function |
|---|---|---|
| 0000000 - 009FFFF | 640 KB System Memory | Onboard DRAM |
| 00A0000-00BFFFF | 128 KB Video RAM | Reserved for Graphics Display Buffer<br>Non-Cacheable |
| 00C0000-00CFFFF | 32 KB I/O Expansion ROM | Reserved for ROM on I/O Adapters |
| 00D0000-00D3FFF | 16 KB I/O Expansion ROM | Reserved for ROM on I/O Adapters |
| 00D4000-00D7FFF | 16 KB I/O Expansion ROM | Reserved for ROM on I/O Adapters |
| 00D8000-00DBFFF | 16 KB I/O Expansion ROM | Reserved for ROM on I/O Adapters |
| 00DC000-00DFFFF | 16 KB I/O Expansion ROM | Reserved for ROM on I/O Adapters |
| 00E0000-00E7FFF | 32 KB for SCSI BIOS | Reserved for SCSI BIOS |
| 00E8000-00EFFFF | 32 KB | Reserved Onboard |
| 00F0000-00FFFFF | 64 KB BIOS | System ROM BIOS (ROM)<br>System RAM BIOS (DRAM) |
| 0100000-0F9FFFF | System Memory | Onboard DRAM |
| 0FA0000-0FFFFFF | 384 KB I/O Card Memory | Reserved for Memory Map<br>I/O Card<br>Non-Cacheable |
| 1000000-FFFFFFF | System Memory | Onboard DRAM |

**PCI INTx# and IDSEL Assignment Map**

| PCI INTx # | PCI Devices | Device IDSEL: ADxx |
|---|---|---|
| INTA# | ADIMM-slot | N |
| INTB# | PCI-Slot1 | AD16 |
| INTC# | PCI-Slot2 | AD17 |

**I/O Address Map**

| *Hex Range* | *Devices* |
|---|---|
| 000-01F | DMA Controller-1 |
| 020-021 | Interrupt Controller-1 |
| 040-043 | System Timer |
| 060-060 | Keyboard Controller 8742 |
| 061-061 | System Speaker |
| 070-071 | CMOS RAM Address and Real Time Clock |
| 080-08F | DMA Page Register |
| 0A0-0A1 | Interrupt Controller-2 |
| 0C0-0DF | DMA Controller-2 |
| 0F0-0FF | Math Co-Processor |
| 170-177 | Secondary IDE |
| 1F0-1F7 | Primary IDE |
| 278-27F | Parallel Printer Port 2 |
| 2F8-2FF | Serial Asynchronous Port 2 |
| 378-37F | Parallel Printer Port 1 |
| 3F0-3F5 | Floppy Disk Controller |
| 3F6-3F6 | Secondary IDE |
| 3F7-3F7 | Primary IDE |
| 3F8-3FF | Serial Asynchronous Port 1 |
| 0CF8 | Configuration Address Register |
| 0CFC | Configuration Data Register |
| 778-77A | Parallel Printer Port 1 |

### IRQ Assignment Map

| IRQx | System Devices | Add-On-Card Devices |
|---|---|---|
| IRQ0 | Timer | N |
| IRQ1 | Keyboard | N |
| IRQ2 | Reserved | N |
| IRQ3 | Serial Port 2 | Reserved |
| IRQ4 | Serial Port 1 | Reserved |
| IRQ5 | Reserved | Reserved |
| IRQ6 | Floppy Disk | Reserved |
| IRQ7 | Parallel Port | Reserved |
| IRQ8 | Real Time Clock | N |
| IRQ9 | N | Reserved |
| IRQ10 | N | Reserved |
| IRQ11 | N | Reserved |
| IRQ12 | PS/2 Mouse | Reserved |
| IRQ13 | Numeric Processor | N |
| IRQ14 | Embedded Hard Disk | Reserved |
| IRQ15 | Reserved | Reserved |

**NOTE:** N - Not be used

### DRQ Assignment Map

| DRQx | System Devices | Add-On-Card Devices |
|---|---|---|
| DRQ0 | N | Reserved |
| DRQ1 | N | Reserved |
| DRQ2 | FDD | N |
| DRQ3 | N | Reserved |
| DRQ4 | Cascade | N |
| DRQ5 | N | Reserved |
| DRQ6 | N | Reserved |
| DRQ7 | N | Reserved |

**NOTE:** N - Not be used

### Environmental Requirements

| Item | Specifications |
|---|---|
| **Temperature** | |
| Operating | +5°C ~ +35°C |
| Non-operating | -20 ~ +60°C (Storage package), -10°C~+60°C (un-package) |
| **Humidity** | |
| Operating | 15% to 80% RH, non-condensing |
| Non-operating | 10% to 90% RH, non-condensing at 40°C |
| **Vibration** | |
| Operating (unpacked) | 5 ~ 500Hz, 2.20g RMS random,10 minutes per axis in all 3 axes |

### Environmental Requirements

| Item | Specifications |
|---|---|
| Non-operating (packed) | 5 ~ 500Hz, 1.09g RMS random,1 hour per axis in all 3 axes |
| Shock Operating | Half sine, 2g 11m seconds |

### Drop Test

| Drop Test | | | | |
|---|---|---|---|---|
| Definition | The protection ability of packing & cushion must be capable of withstanding, with no physical or functional demage, mechanical impact from height-specific drops. | | | |
| Test Standard | | | | |
| **Package Cross Weight** | | **Drop Height** | | **Not of Drop** |
| KGs | lbs | CM | Inch | |
| 0~9.1 | 0~20 | 76 | 30 | 10 |
| 9.1~18.2 | 20~40 | 61 | 24 | 10 |
| 18.2~27.3 | 40~60 | 46 | 18 | 10 |
| 27.3~45.4 | 60~100 | 31 | 12 | 10 |
| 10 drops : one corner, three edges, six surfaces | | | | |

# Power Management Function ( ACPI support function)

### Device Standby Mode

- Independent power management timer for hard disk drive devices (0-15 minutes, time step=1 minute).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable V-sync to control the VESA DPMS monitor.
- Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).
- Resume recovery time: 3-5 sec.

### Global Standby Mode

- Global power management timer (2-120 minutes, time step=10 minute).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Resume recovery time: 7-10 sec.

### Suspend Mode

- Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external switch button.
- CPU goes into SMM.
- CPU asserts STPCLK# and goes into the Stop Grant State.
- LED on the panel turns amber colour.
- Hard disk drive goes into SLEEP mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Ultra I/O and VGA chip go into power saving mode.
- Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Return to original state by pushing external switch button, modem ring in and USB keyboard for ACPI mode.

### ACPI

- ACPI specification 1.0b.
- S0, S1, S3 and S5 sleep state support.
- On board device power management support.
- On board device configuration support.

# Dual Channel

VT x800 series support the Dual Channel Technology. After operating the dual channel technology, the bandwidth of memory bus will add double up to 4GB/s.

The mainboard inculdes 4 DIMM slots, and each channel has two DIMM sockets as following:

- Channel A : DDR1, DDR3
- Channel B : DDR2 , DDR4

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of Intel chipset specifications.

| Memory Number | | Description |
|---|---|---|
| 1 | Only one DDR memory module is installed ? | The Dual Channel Technology can't operate when only one DDR memory module is installed. |
| 2 | Two DDR memory modules are installed ( the same memory size and type) ? | The Dual Channel Technology will operate when two memory modules are inserted individually into Channel A and B. If you install two memory modules in the same channel, the Dual Channel Technology will not operate. |
| 3 | Three DDR memory modules are installed ? | Pleae note that the Dual Channel Technology will not operate when three DDR memory modules are installed; part of them will not be detected. |
| 4 | Four DDR memory modules are installed ? | If you install four memory modules at the same time, the Dual Channel Technology will operate only when those modules have the same size and type. |

**NOTE:** We strongly recommend user to slot two DDR memory modules into the DIMMs with the same color in order for Dual Channel Technology to work.

The following tables include all memory-installed combination types:

**Dual Channel Technology (DS: Double Side, SS: Single Side)**

| | DDR1 | DDR2 | DDR3 | DDR4 |
|---|---|---|---|---|
| 2 memory modules | DS/SS | X | DS/SS | X |
| | X | DS/SS | X | DS/SS |
| 4 memory modules | DS/SS | DS/SS | DS/SS | DS/SS |

**Don't operate Dual Channel Technology (DS:Double Side, SS: Single Side)**

| | DDR1 | DDR2 | DDR3 | DDR4 |
|---|---|---|---|---|
| 1 memory module | DS/SS | X | X | X |
| | X | DS/SS | X | X |
| | X | X | DS/SS | X |
| | X | X | X | DS/SS |
| 2 memory module | DS/SS | DS/SS | X | X |
| | X | X | DS/SS | DS/SS |
| 3 memory module | DS/SS | DS/SS | DS/SS | X |
| | DS/SS | DS/SS | X | DS/SS |
| | DS/SS | X | DS/SS | DS/SS |
| | X | DS/SS | DS/SS | DS/SS |

# System Utilities

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required setting or to active certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the mainboard. When the power is turned off, the battery on the mainboard supplies the necessary power to the CMOS SRAM.

When the power is turned on, pushing the <Del> button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing “Ctrl+F1”. When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings.

Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system. BIOS is a Window s-based utility that doesn’t  required users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

**Control Keys**

| Item | Description |
|---|---|
| wxyz | Move to selection |
| e | Select Item |
| ^ | Main Menu: Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu, Exit current page and return to Main Menu. |
| { | Increase the numeric value or make changes |
| } | Decrease the numeric value or make changes |
| l | General help, only for Status Page Setup Menu and Option Page Setup Menu |
| m | Item Help |
| p | Restore the previous CMOS value from CMOS, only for option Page Setup Menu |
| r | Load the Optimized Defaults |
| t | System Information |
| u | Save all the CMOS changes, only for Main Menu |

**NOTE: Main Menu**: This is the online description of the highlighted setup functions is displayed at the bottom of the screen.

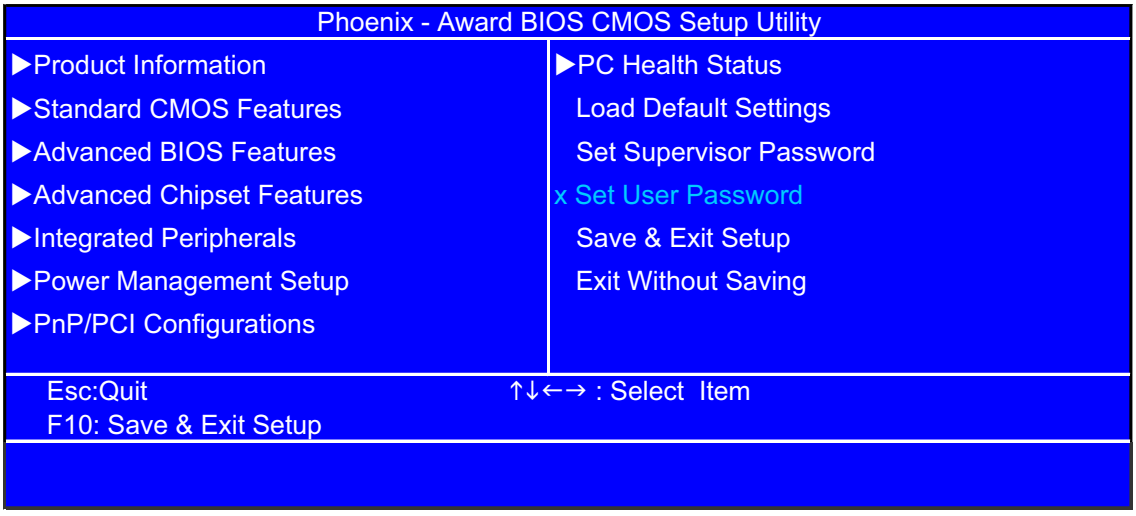
**NOTE: Status Page Setup Menu/ Option Page Setup Menu**: Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

# Entering Setup

Once enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen.

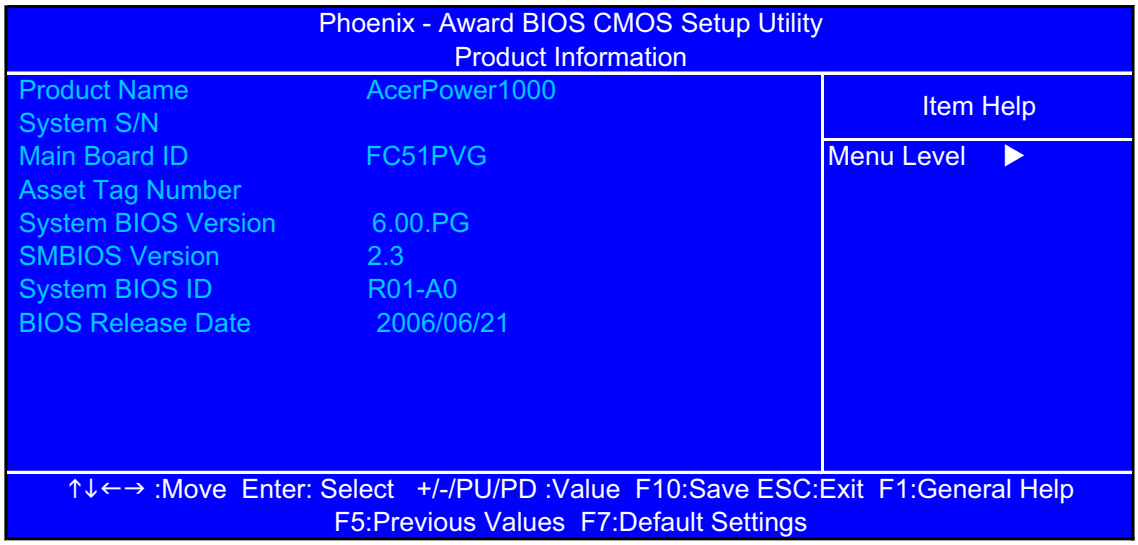
Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

**Note: If you can't find the setting you want, please press "Alt+F4" to search the advanced option hidden. As for the hidden options, we have annotations following those with further setting screen menu.**



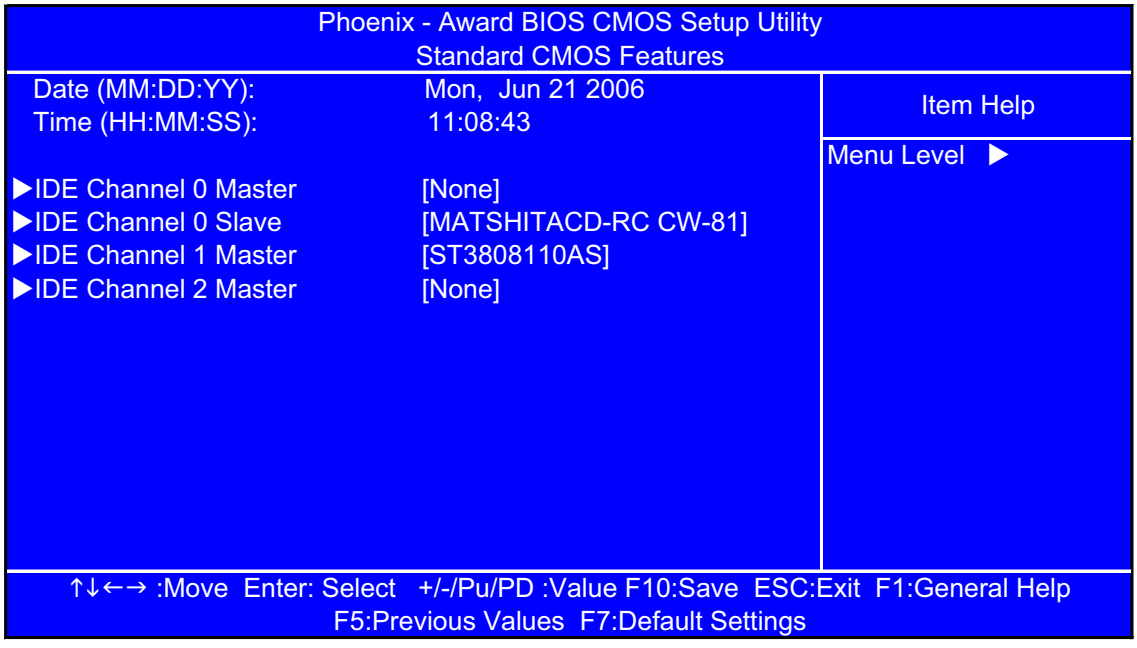

| Parameter | Description |
|---|---|
| Product Information | This page shows the relevant information of the mainboard |
| Standard CMOS Features | This setup page includes all the items in standard compatible BIOS |
| Advanced BIOS Features | The values for the chipset can be changed through this menu, and the system performance can be optimized. |
| Advanced Chipset Features | This setup page allows user to configure the advanced chipset settings, such as memory timing. |
| Integrated Peripherals | This setup page includes all onboard peripherals |
| Power Management Setup | This setup page includes all the items of Green function features |
| PnP/PCI Configuration | This setup page includes all configurations of PCI&PnP ISA resources |
| PC Health Status | This setup page is the System auto detect Temperature, voltage, fan and speed |
| Load Default Settings | Default Settings indicates the value of the system parameters which the system would be in best performance configuration |
| Set Supervisor Password | Change, set or disable password. It allows you to limit access to the system and Setup, or just to Setup |
| Set User Password | Change, set or disable password. It allows you to limit access to the system |
| Save & Exit Setup | Save CMOS value settings to CMOS and exit setup |
| Exit Without Saving | Abandon all CMOS value changes and exit setup |

# Product Informatoin




| Parameter | Description |
|---|---|
| Product Name | This item lists the product name |
| System S/N | This item lists the system serial number |
| Main Board ID | This item lists the mainboard ID |
| Asset Tag Number | This item lists the asset tag number of the system |
| System BIOS Version | This item lists the system BIOS version |
| SMBIOS Version | This item lists the system SMBIOS version |
| System BIOS ID | This item lists the system BIOS ID |
| BIOS Release Date | This item lists the BIOS release date |

# Standard CMOS Features


Phoenix - Award BIOS CMOS Setup Utility
Standard CMOS Features
Date (MM:DD:YY): Mon, Jun 21 2006
Time (HH:MM:SS): 11:08:43
▶IDE Channel 0 Master [None]
▶IDE Channel 0 Slave [MATSHITACD-RC CW-81]
▶IDE Channel 1 Master [ST3808110AS]
▶IDE Channel 2 Master [None]
Item Help
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/Pu/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Default Settings

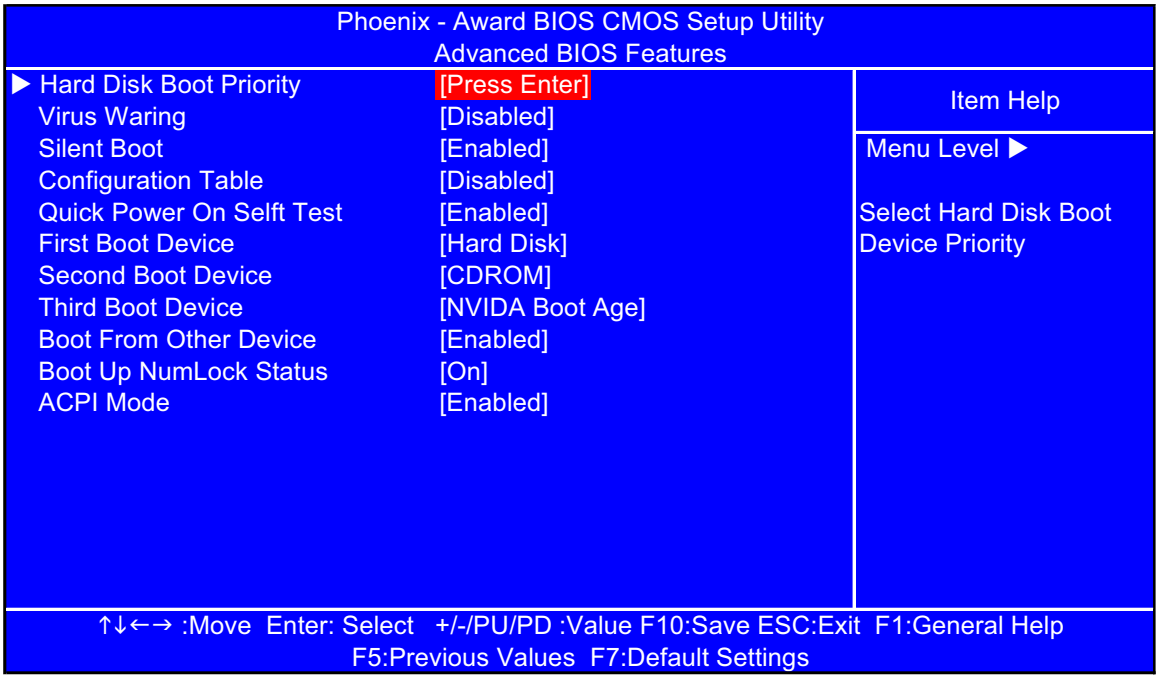
The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|---|---|---|
| Date | Lets you set the date following the weekday-month-day-year format | Week : from Sun. to Sat., determined by BIOS and is display only<br>Month : from Jan. through Dec.<br>Day : from 1 to 31 ( or the maximum allowed in the month)<br>Year : from 1999 to 2098 |
| Time | Lets you set the time following the hour-minute-second format | The items format is <hour> <minut><second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00 |

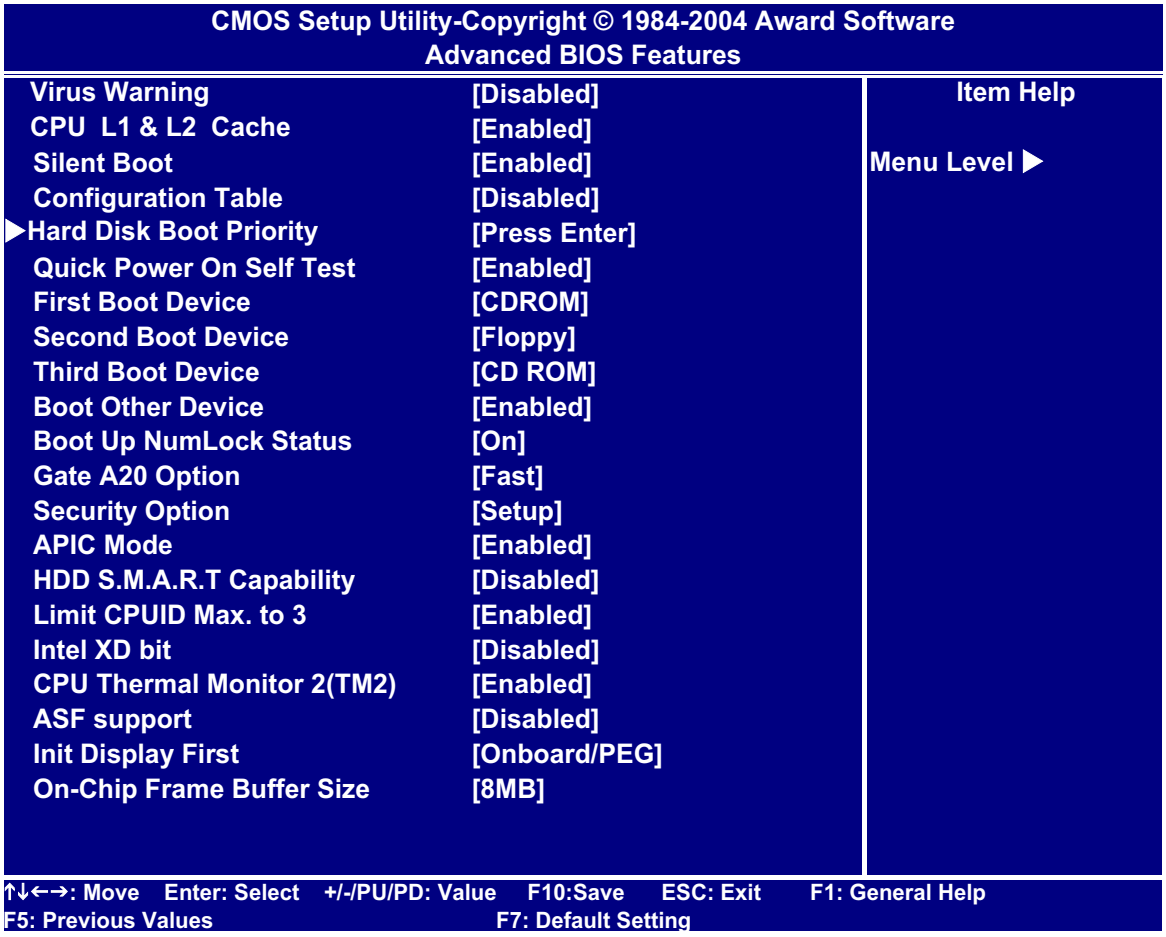
| Parameter | Description | Options |
|---|---|---|
| IDE channel 0/1 Master, Slave | Allows you to configure the hard disk drive connected to the master port of IDE channel. To enter the IDE Master or Slave setup, press [Enter]. The IDE CD-ROM is always automatically detected. | IDE HDD Auto-Detection Press [Enter] to select this option for automatic device detection.<br>IDE Primary/Secondary Master, Slave IDE Device Setup. You can use one of three methods:<br>Auto : Allows BIOS to automatically detect IDE devices during POST (default)<br>None : Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up<br>Manual : User can manually input the correct settings<br>Access Mode : Use this to set the access mode for the hard drive. the four options are: CHS/LBA/Large/Auto (default: Auto)<br>* Cylinder : Number of cylinders<br>* Head : Number of heads<br>* Precomp : Write precomp<br>* Landing Zone : Landing Zone<br>Sector : Number of sectors<br>Access Mode allows you to select the access mode. The options are CHS, LBA, Large, and **Auto**. |
| Drive A | The category identifies the types of floppy disk drive A that has been installed in the computer. | None : No floppy drive installed<br>360K, 5.25” : 5.25 inch PC type standard drive ; 360Kbyte capacity<br>1.2M, 5.25” : 5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled)<br>720K, 3.5” : 3.5 inch double-sided drive; 720Kbyte capacity<br>**1.44M, 3.5”** : 3.5 inch double-sided drive; 1.44Mbyte capacity<br>2.88M, 3.5” : 3.5 inch double-sided drive; 2.88Mbyte capacity |
| Halt On | This parameter enables you to control the system stops in case of Power On Self Test errors (POST) | No Errors : The system boot will not stop for any error that may be detected and you will be prompted<br>All Errors : Whenever the BIOS detects a non-fatal error the system will be stopped<br>**All, But Keyboard** : The system boot will not stop for a keyboard error; it will stop for all other errors (Default value)<br>All, But Diskette : The system boot will not stop for a disk error; it will stop for all other errors<br>All, But Disk/Key : The system boot will not stop for a keyboard or disk error; it will stop for all other errors. |

# Advanced BIOS Features

The following screen shows the Advanced BIOS Features:


Phoenix - Award BIOS CMOS Setup Utility
Advanced BIOS Features
▶ Hard Disk Boot Priority [Press Enter]
Virus Waring [Disabled]
Silent Boot [Enabled]
Configuration Table [Disabled]
Quick Power On Selft Test [Enabled]
First Boot Device [Hard Disk]
Second Boot Device [CDROM]
Third Boot Device [NVIDA Boot Age]
Boot From Other Device [Enabled]
Boot Up NumLock Status [On]
ACPI Mode [Enabled]
Item Help
Menu Level ▶
Select Hard Disk Boot Device Priority
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Default Settings

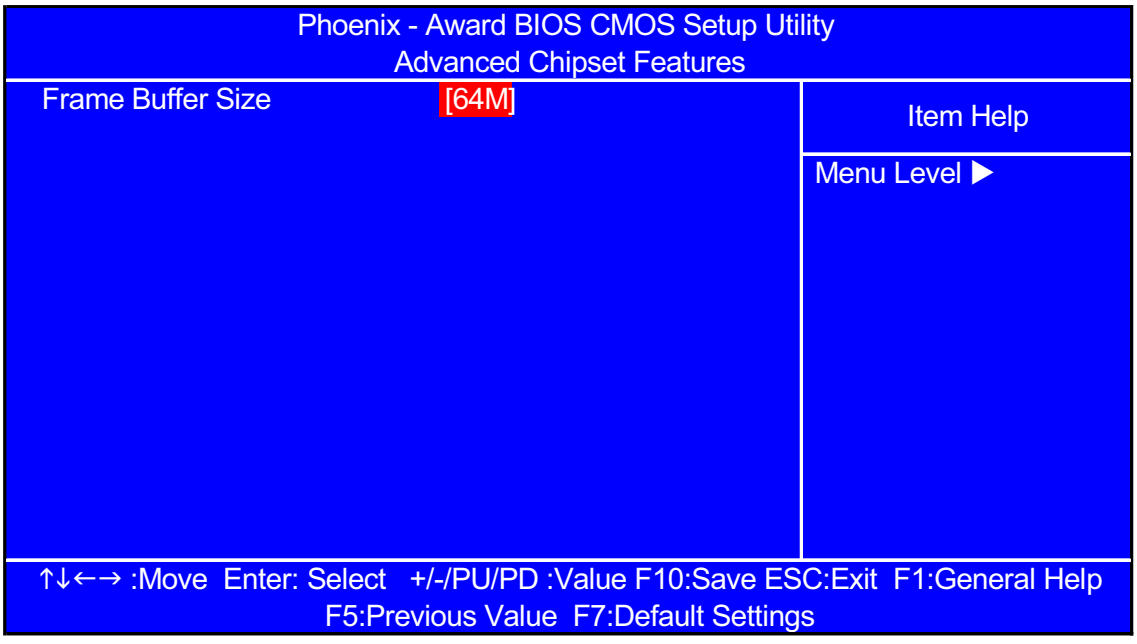
**Alt+F4 : Hidden Setting**


CMOS Setup Utility-Copyright © 1984-2004 Award Software
Advanced BIOS Features
Virus Warning [Disabled]
CPU L1 & L2 Cache [Enabled]
Silent Boot [Enabled]
Configuration Table [Disabled]
Hard Disk Boot Priority [Press Enter]
Quick Power On Self Test [Enabled]
First Boot Device [CDROM]
Second Boot Device [Floppy]
Third Boot Device [CD ROM]
Boot Other Device [Enabled]
Boot Up NumLock Status [On]
Gate A20 Option [Fast]
Security Option [Setup]
APIC Mode [Enabled]
HDD S.M.A.R.T Capability [Disabled]
Limit CPUID Max. to 3 [Enabled]
Intel XD bit [Disabled]
CPU Thermal Monitor 2(TM2) [Enabled]
ASF support [Disabled]
Init Display First [Onboard/PEG]
On-Chip Frame Buffer Size [8MB]
Item Help
Menu Level ▶
↑↓←→: Move Enter: Select +/-/PU/PD: Value F10:Save ESC: Exit F1: General Help
F5: Previous Values F7: Default Setting

| Parameter | Description | Options |
|---|---|---|
| Hard Disk Boot Priority | Press [Enter] to enter the sub menu to select Hard Disk Boot Device Priority. | Use wx to select a device, then press<+> to move it up, or < - > to move it down the list. |
| Virus Warning | This feature allows you to enable the VIRUS warning function for IDE Hard Disk boot sector protection. If this function is enabled and there is someone attempt to write data into this area, BIOS will show a warning message on screen and the alarm will beep. | Enabled<br>**Disabled** |
| Silent Boot | This features allows you to enable or disable if the screen logo to display or no during POST | **Enabled**<br>Disabled |
| Configuration Table | This feature allows you to enable or disable if showing summary screen or not | Enabled<br>**Disabled** |
| Quick Power On Self Test | This feature allows the system to skip certain tests while booting. When this function is enabled, it will decrease the time needed to boot the system, which means to quick power on self test function | **Enabled**<br>Disabled |
| First / Second / Third Boot Device | The item allows you to set the sequence of boot device where BIOS attempts to load the disk operating system. | **Floppy**, LS120, Hard Disk, CD-ROM, ZIP, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled |

| Parameter | Description | Options |
|---|---|---|
| Boot other Devices | This item allows you to enable or disable to boot from other device | **Enabled**<br>Disabled |
| Boot Up NumLock Status | This item allows you to enable or disable to set keyboard is number keys or arrow keys | **Enabled**<br>Disabled |
| APCI Mode | This option is used to set up enable or disable the APCI funtion | Enabled<br>**Disabled** |

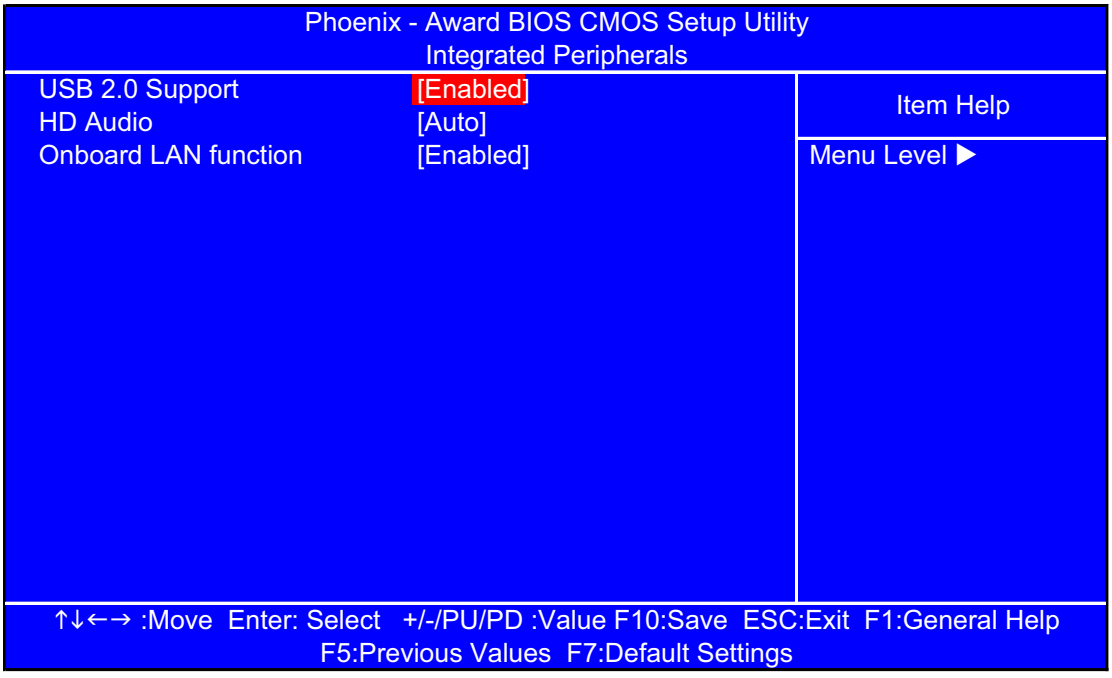
# Advanced Chipset Features


Phoenix - Award BIOS CMOS Setup Utility
Advanced Chipset Features
Frame Buffer Size
[64M]
Item Help
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Value F7:Default Settings

| Parameter | Description | Options |
|---|---|---|
| Frame Buffer Size | This field displays frame buffer size. | 32, **64**, 128 |

# Integrated Peripherals

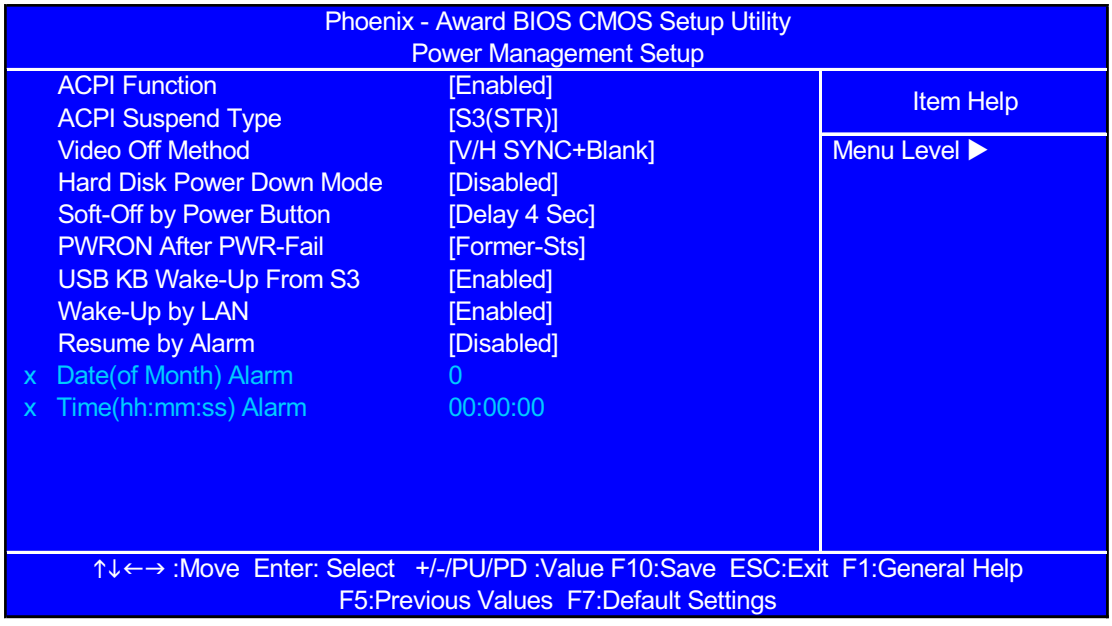
All onboard peripherals can be set up through this menu.




| Parameter | Description | Options |
|---|---|---|
| USB 2.0 Support | Enable this item if the system supports USB 2.0 | **Enabled** : Enable USB 2.0 Controller<br>Disabled : Disable USB 2.0 Controller |
| HD Audio | Select Enabled to use the HD audio capabilities of your system. | **Auto** : The system will automatically detect the HD audio funtion.<br>Enabled: Enable HD audio functionr<br>Disabled : Disable HD audio function |
| Onboard LAN function | Enables, disables or auto detects onboard LAN function. | **Enabled** : The system will enables onboard LAN funtion.<br>Auto: The system will automatically detect onboard LAN function<br>Disabled : Disable onboard LAN function |

# Power Management Setup

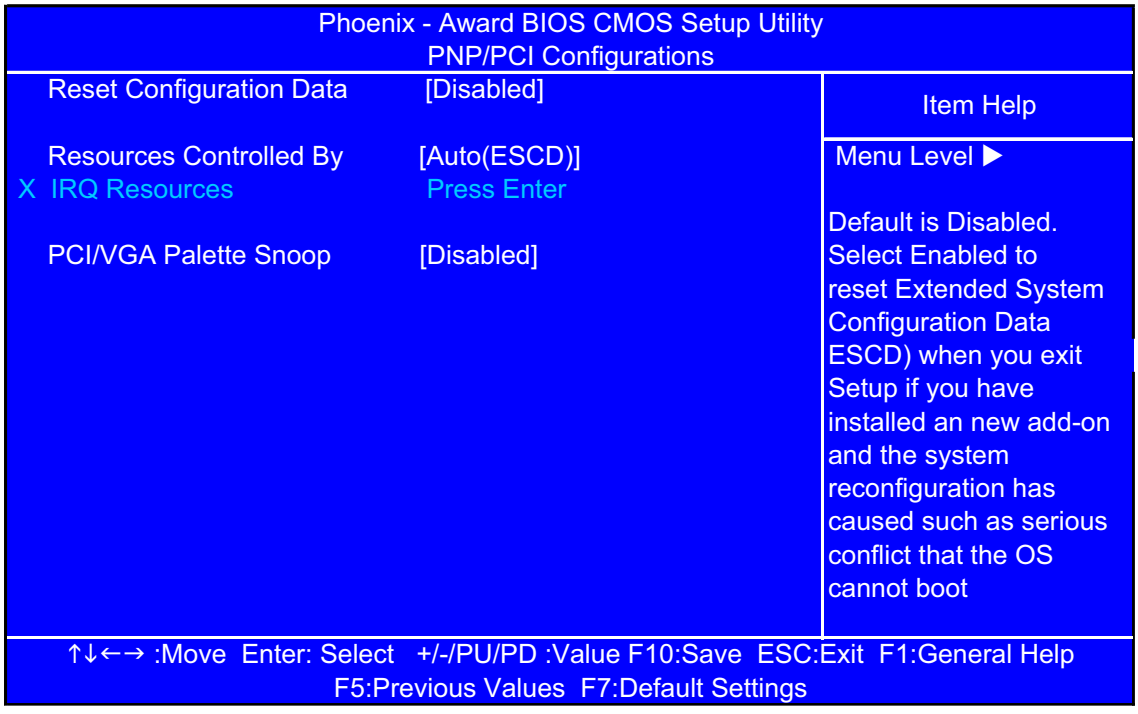
The Power Management menu lets you configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.


Phoenix - Award BIOS CMOS Setup Utility
Power Management Setup
ACPI Function [Enabled]
ACPI Suspend Type [S3(STR)]
Video Off Method [V/H SYNC+Blank]
Hard Disk Power Down Mode [Disabled]
Soft-Off by Power Button [Delay 4 Sec]
PWRON After PWR-Fail [Former-Sts]
USB KB Wake-Up From S3 [Enabled]
Wake-Up by LAN [Enabled]
Resume by Alarm [Disabled]
x Date(of Month) Alarm 0
x Time(hh:mm:ss) Alarm 00:00:00
Item Help
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Default Settings

| Parameter | Description | Options |
|---|---|---|
| ACPI Function | This item allows you to enable or disable the ACPI function | **Enabled**<br>Disabled |
| ACPI Suspend Type | This item specifies the power saving modes for ACPI function. S1(POS): The S1 sleep mode is a low power state. In this state, no system context (CPU or chipset) is lost and hardware maintains all system context. S3 (STR): The S3 sleep mode is s power-down state in which power is supplied only to essential components such as main memory and wake-capable devices and all system context is saved to main memory. The information stored in memory will be used to restore the PC to the previous state when an wake-up event occurs. | **S1 (POS)** : Set ACPI suspend type to S1/POS(Power On Suspend).<br>S3 (STR) : Set ACPI suspend type to S3/STR |
| Video Off Method | Determines the manner in which the monitor is blanked.<br>V/H SYNC+Blank: System turns off vertical and horizontal synchronization ports and writes blanks to the video buffer.<br>DPMS Support: Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards Association (VESA). Use the software supplied for your video subsystem to select video power management values.<br>Blank Screen: System only writes blanks to the video buffer. | **V/H SYNC+Blank**<br>DPMS Support<br>Blank Screen |

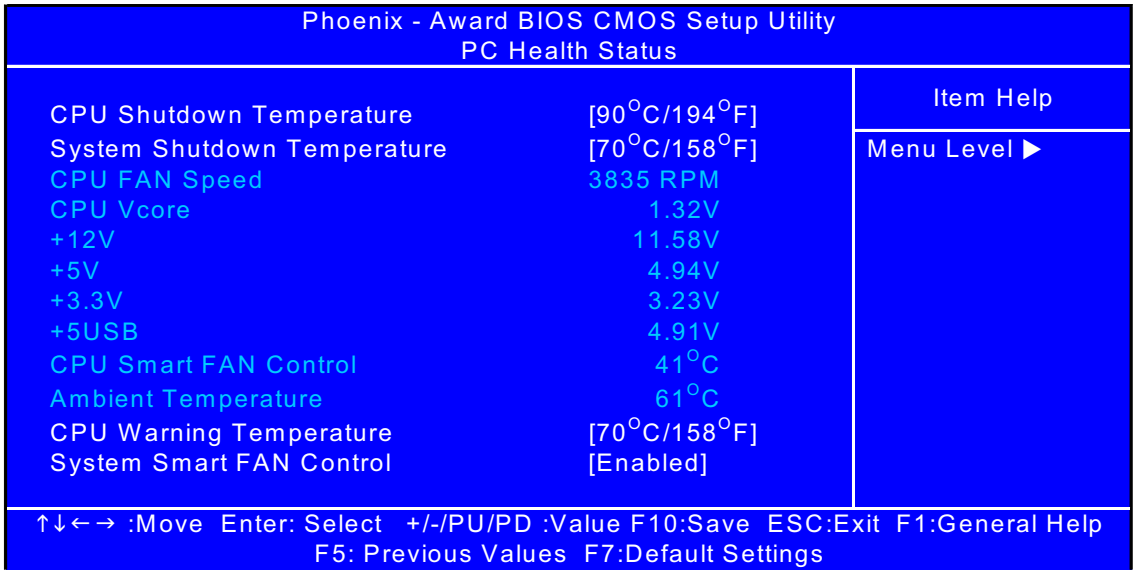
| Parameter | Description | Options |
|---|---|---|
| Hard Disk Power Down Mode | After the selected period of drive inactivity, the hard disk drive powers down while all other devices remain active | Disabled, 1 min, 2 min, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min, 15 min |
| Soft-off by Power Button | This feature allows users to configure the power button function. | Instand-off : Press down button then power off instantly<br>**Delay 4 Sec**. : Press power button 4 sec. to power off. Enter suspend if button is pressed less than 4 sec. |
| PWRON After PWR-Fail | This item allows you to select if you want to power on the system after power failure. | Off, On and Former-Sts |
| USB KB Wake-Up From S3 | This item allows you to wake up the keyboard from S3 stage. | **Enabled**, Disabled |
| Wake-Up by LAN | This item allows you to wake up the system by LAN signals. | Enabled, **Disabled** |
| Resume by Alarm | You can set “Resume by Alarm” item to enabled and key in Data/Time to power on system | Disabled : Disable this function<br>Enabled : Enable alarm function to Power On system<br>If RTC Alarm Lead To Power On is Enabled.<br>Date (of Month) Alarm : Everyday, 1~31<br>Time (hh:mm:ss) Alarm:<br>(0.~23):(0~59):(0~59) |

# PnP/PCI Configuration


Phoenix - Award BIOS CMOS Setup Utility
PNP/PCI Configurations
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
X IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
Item Help
Menu Level ▶
Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD) when you exit Setup if you have installed an new add-on and the system reconfiguration has caused such as serious conflict that the OS cannot boot
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Default Settings

| Parameter | Description | Options |
|---|---|---|
| Reset Configuration Data | In case a conflict occurs after you assign the IRQs or after you configure your system, you can enable this function to allow your system to automatically reset your configuration and reassign the IRQs, DMAs and I/O address. | **Disabled**, Enabled |
| Resources Controlled By | if this option is set to Auto, the BIOS automatically selects all the devices Plug & Play compatible specifying their Interrupt and DMA. If you selected the manual setting, you can specify the device for each interrupt it is assigned to (ISA o PCI); this is the same for DMAs. | **Auto (ESCD)**, Manual |
| PCI/VGA Palette Snoop | Enable this option to correct screen color shifts, when there is a combination of VGA cards, accelerator cards, or MPEG cards present. | **Disabled**, Enabled |

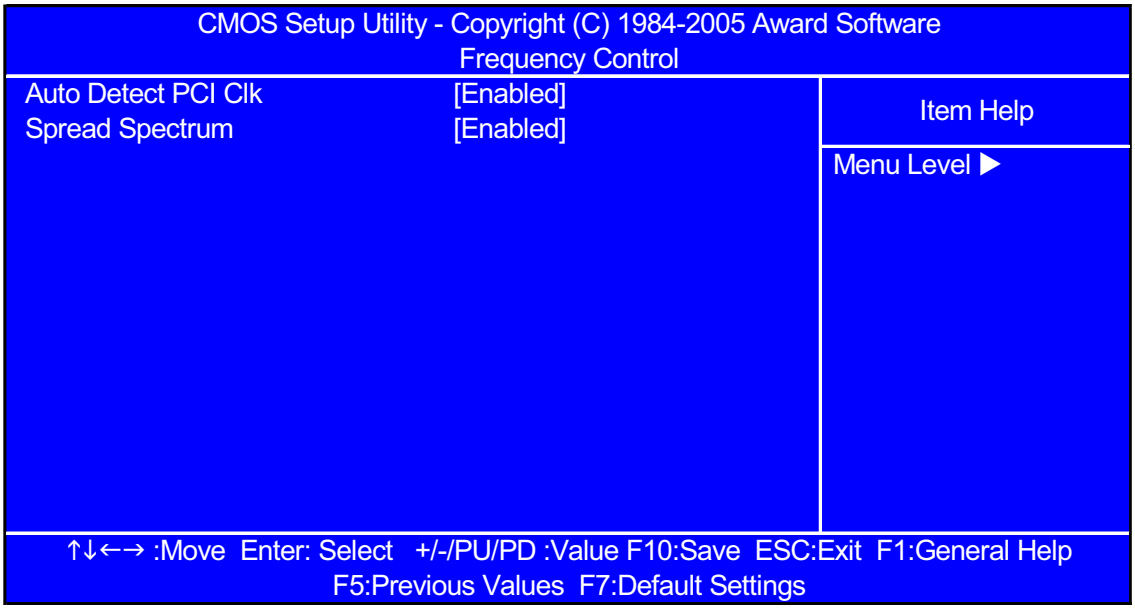
# PC Health Status




The following table describes the parameters found in this menu:

| Parameter | Description | |
|---|---|---|
| Chassis Opened Warning | Warning beep alerts as chassis opened. | Enabled<br>Disabled |
| Shutdown Temperature | This feature allow to set the Shutdown temperature. | 90 ° C/194 ° F<br>Disabled |
| Current Voltage (V) Vcore /DDR18V/ +1.5V/+3.3V/+5V/+12V | Detect system's voltage status automatically | |
| CPU Temperature | Detect CPU Temperature automatically | |
| CPU / SYSTEM FAN Speed (RPM) | Detect CPU/SYSTEM Fan Speed status automatically | |
| CPU Smart Fan Function | This item allows you to enable or disable the SMART fan control function | **Enable**<br>Disabled |
| Hidden Setting | | |
| System Smart Fan Function | **Enabled/**Disabled | |

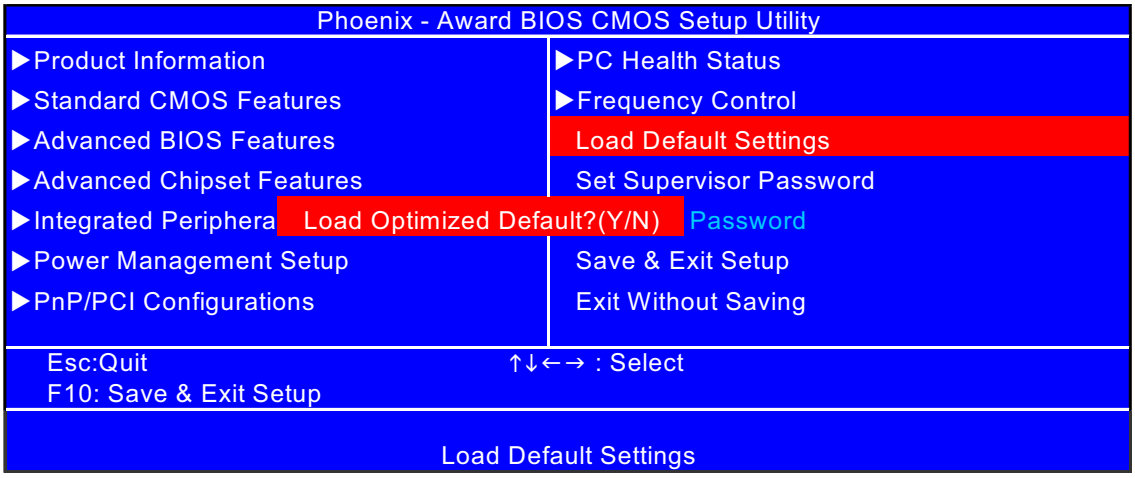
# Frequency Control


CMOS Setup Utility - Copyright (C) 1984-2005 Award Software
Frequency Control
Auto Detect PCI Clk [Enabled]
Spread Spectrum [Enabled]
Item Help
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F7:Default Settings

| Parameter | Description | |
|---|---|---|
| Auto Detect PCI Clk | To reduce the occurrence of electromagnetic interference (EMI), the BIOS detects the presence or absence of components in DIMM and PCI slots and turns off system clock generator pulses to empty slots. | Enabled<br>Disabled |
| Spread Spectrum | This feature allows to enable/disable the Spread Spectrum modulate. | Enabled<br>Disabled |

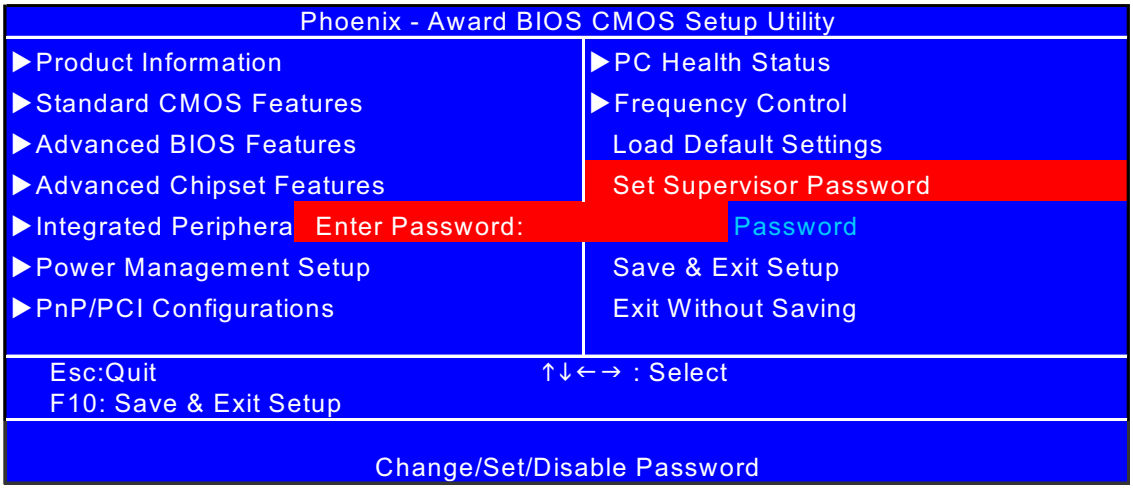
# Load Default Settings

Selecting the field loads the factory defaults for BIOS and Chipset Features which the system automatically. detects.



## Set Supervisor/User Password

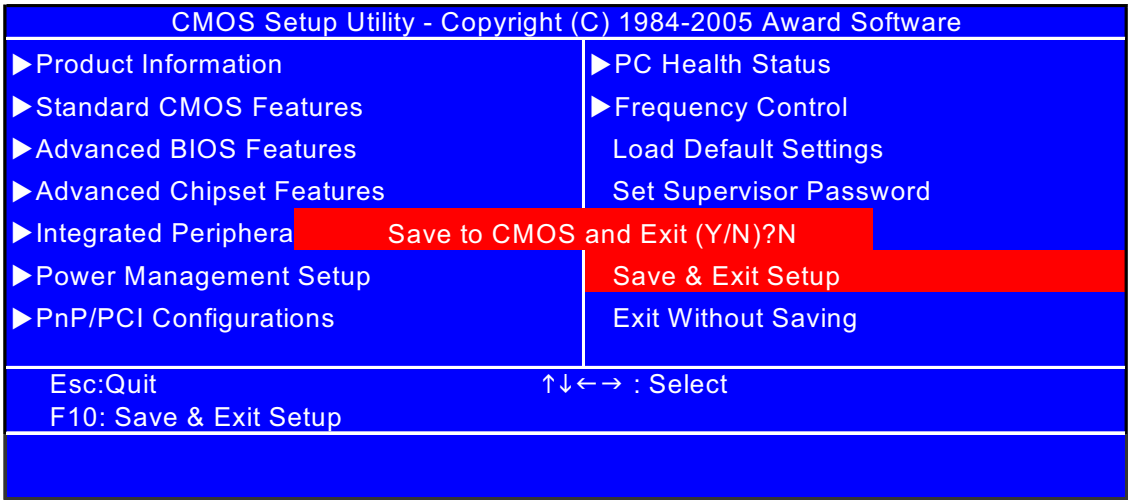
When this function is selected, the following message appears at the center of the screen to assist you in creating a password.




The access rights and permission associated with the Supervisor password are higher than those os a regular User password. The Supervisor password can be used to start the system or modify the CMOS settings. The User password can also start the system. While the User password

## Save & Exit Setup

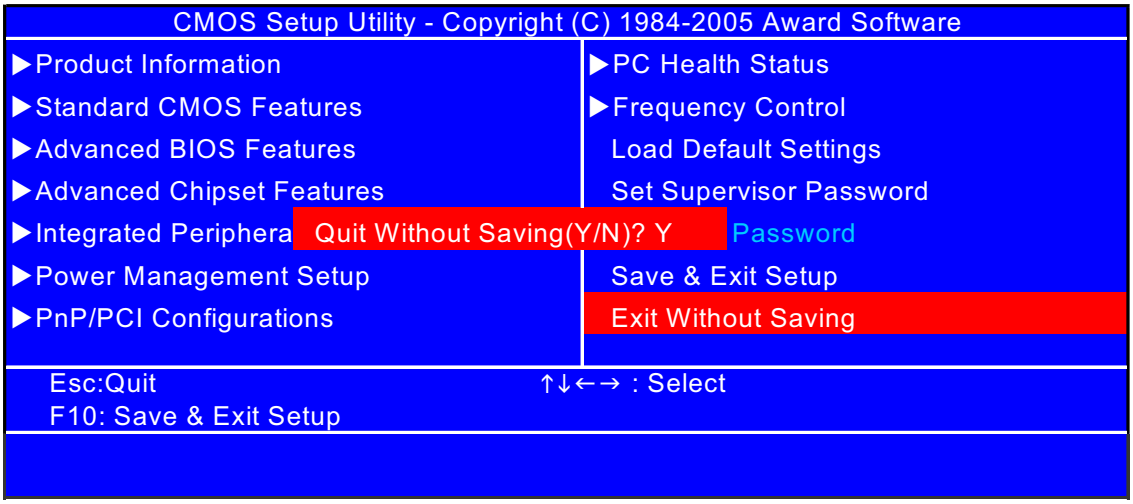
Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility.




When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu.

# Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility.




When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

**NOTE:** If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.

# Machine Disassembly and Replacement

This chapter will guide you how to disassemble and Reassemble the Aspire L100.

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge.
- Wire cutter.
- Phillips screwdriver (may require different size).

**NOTE:** The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

# General Information

## Before You Begin

Before proceeding with the disassenbly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

# Aspire L100 Disassembly Procedure

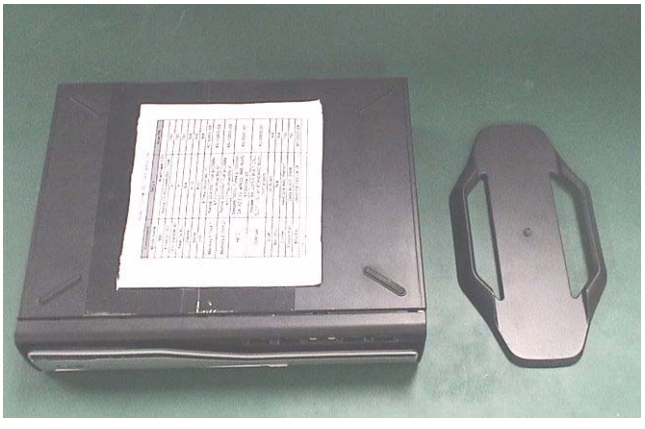
This section tells you how to disassemble the system when you need to perform system service. Please also refer to the disassembly video, if available.

**CAUTION:** Before you proceed, make sure you have turned off the system and all peripherals connected to it.

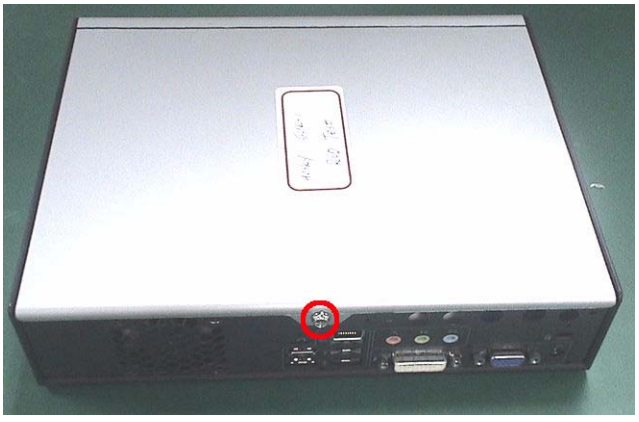
## Opening the System

1. Slide the system from the plate.

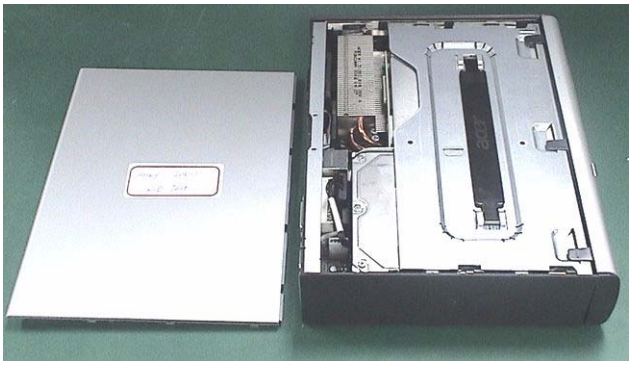
2. Then place the system on a flat surface.



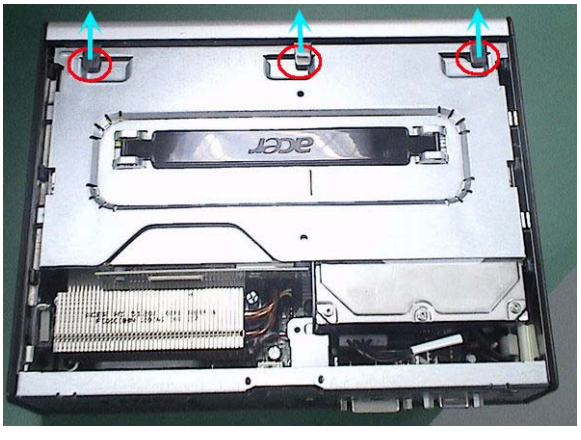
3. Remove the screw fastening the top cover.



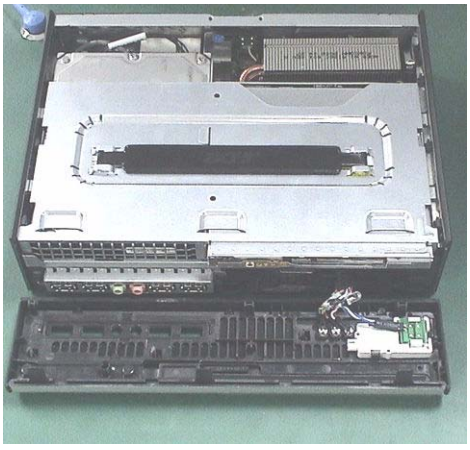
4. Remove the top cover from the system.



5. Pull up the three locks as shown.

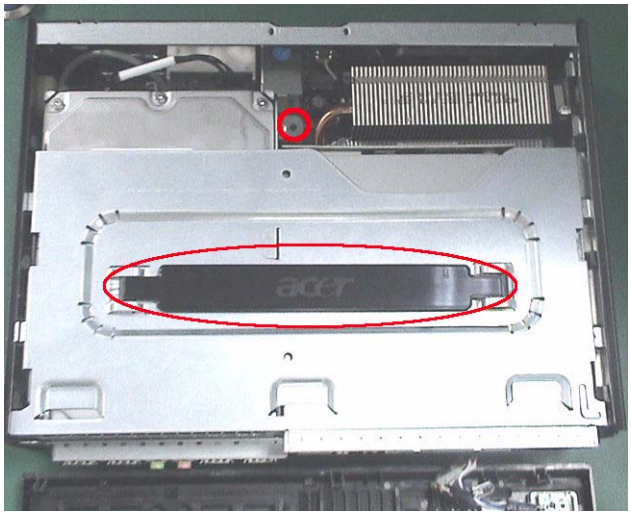


6. Detach the front bezel from the system.

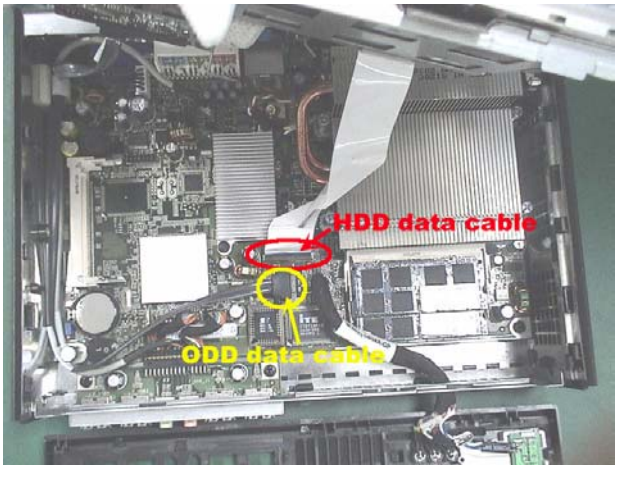


## Removing the ODD and HDD Module

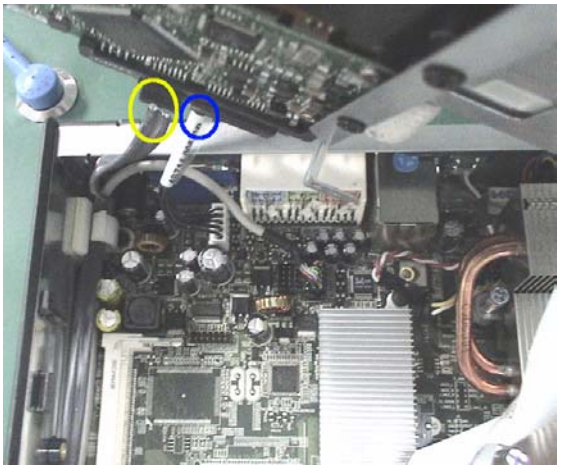
1. Remove the belt and the screw holding the ODD and the HDD module.




2. Disconnect the HDD data cable and the ODD data cable from the main board.

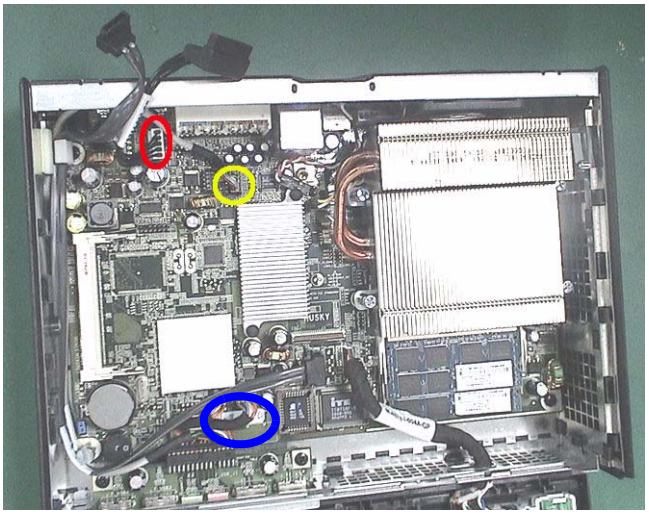


3. Then disconnect the HDD data (highlighted in yellow circle) cable and HDD power cable (highlighted in blue circle) from the HDD module.

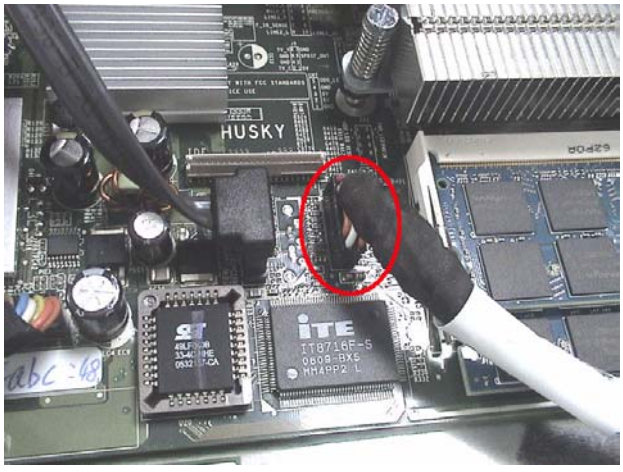


## Removing Cables and Memorys

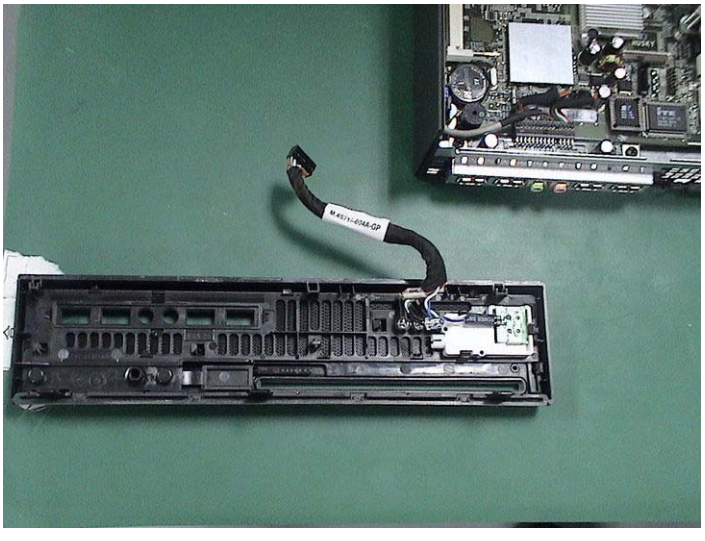
1. Disconnect the HDD SATA cable (red circle), USB/audio cable on one side (yellow circle) and USB/audio cable on the other side from the main board.



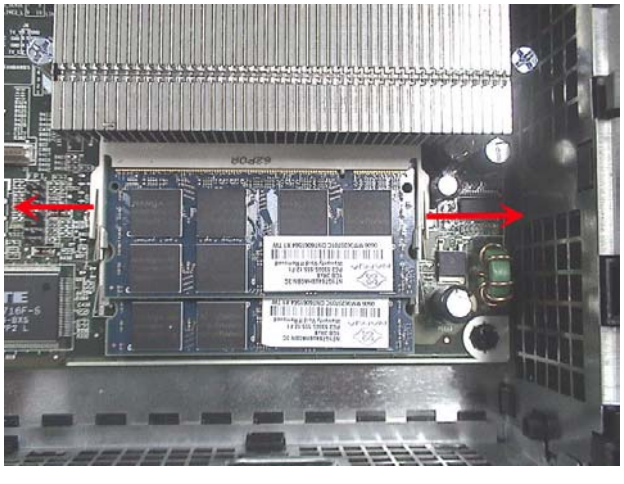
2. Disconnect the LED cable from the main board.




**3.** Detach the front bezel from the system.

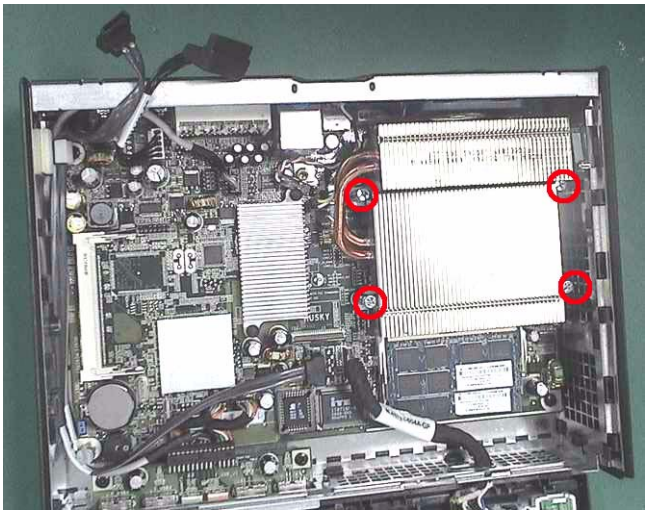


**4.** Pop out the memorys and remove them from the main board.

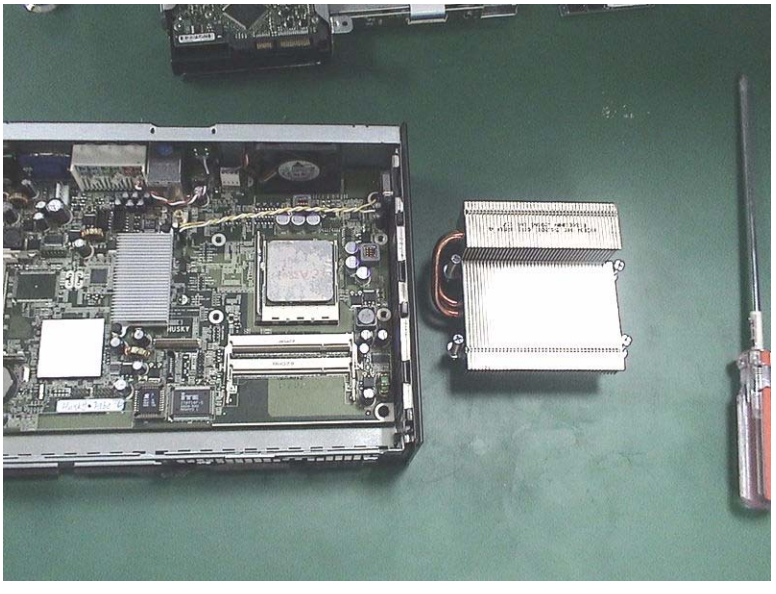


## Removing the CPU

1. Remove the four screws fastening the CPU cooler to the main board.



2. Detach the CPU cooler from the main board.



3. Press the CPU socket lever (highlighted in red) and pull the lever outwards a little to release the CPU lock.

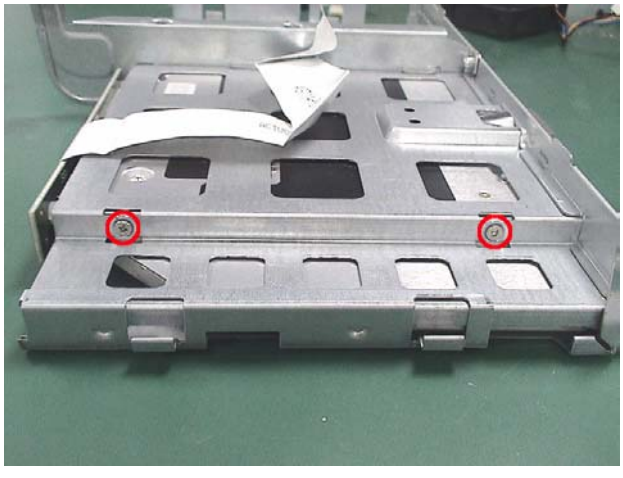
4. Carefully remove the CPU from the socket on the main board.

## Removing the HDD/ODD from the Module

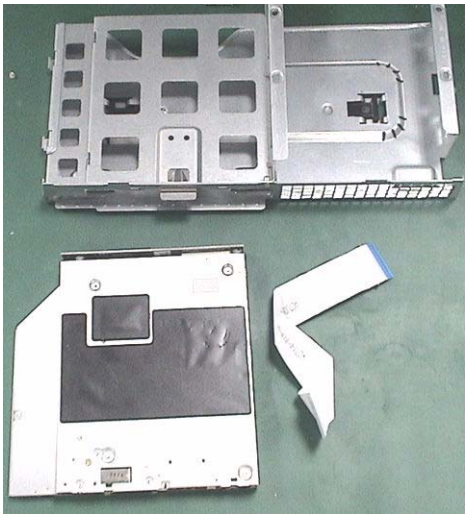
1. Remove the four screws holding the HDD to the HDD bracket.

2. Pull out the HDD from the bracket.

3. Remove the two screws fastening the ODD to the bracket.

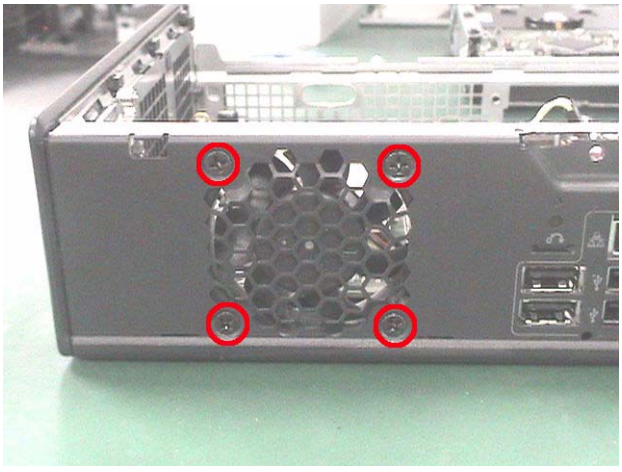


4. Take out the ODD from the bracket and disconnect the ODD cable from the ODD.

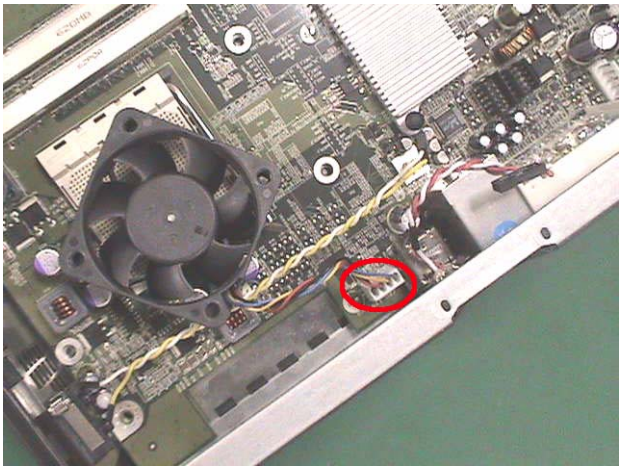


## Removing the System Fan

1. Remove the four screws fastening the system fan on rear panel.



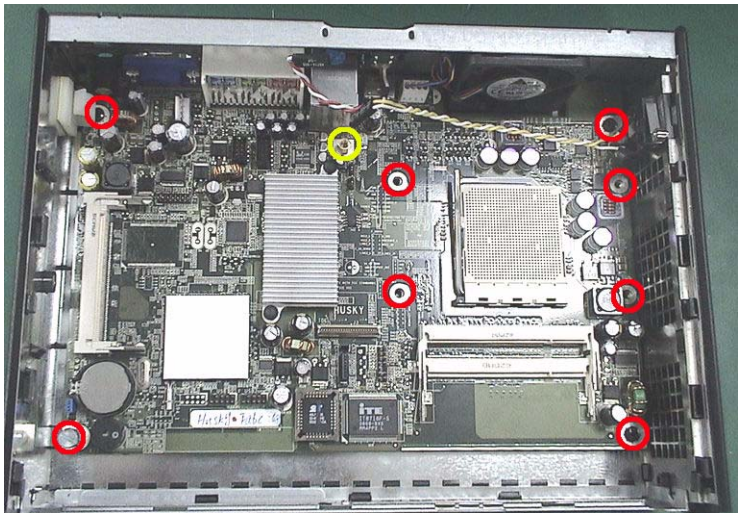
2. Disconnect the system fan cable from the main board.



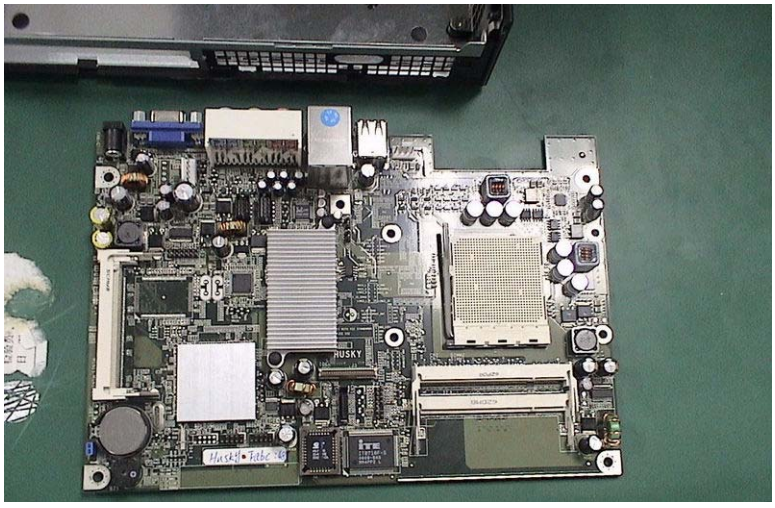
3. Then take out the system fan.

## Removing the Main Board and USB/Audio Module

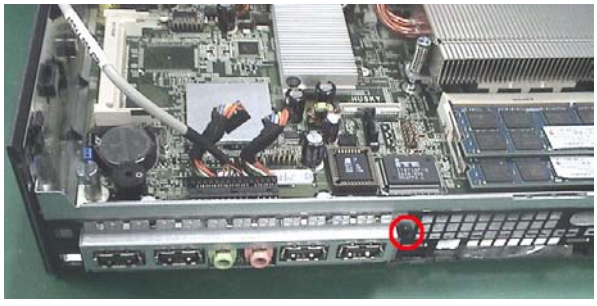
1. Remove the eight screws and one screw-nut fastening the main board to the housing.



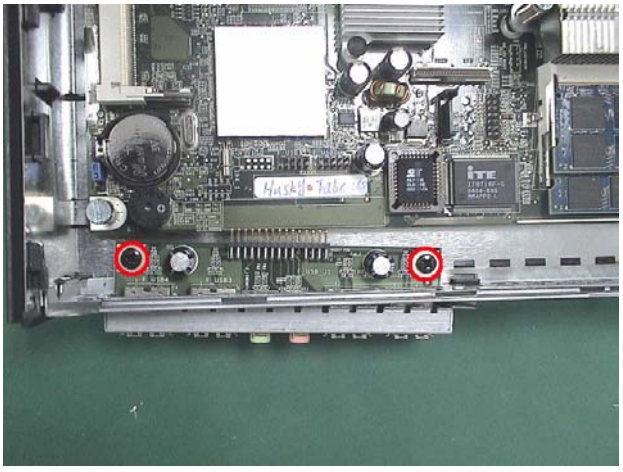
2. Take out the main board from the housing.



3. Remove the screw fastening the audio module to the housing.



4. Remove the two screws holing the audio module to the housing.



5. Remove the audio board from the housing.

6. Then remove the audio bracket from the housing.

# Troubleshooting

This chapter provides troubleshooting information for the Aspire L100

- Power-On Self-Test (POST)
- Index of Error Message
- Index of Error Symptoms
- Undetermined Problems

# Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- Microprocessor with built-in numeric co-processor and cache memory subsystem
- Direct Memory Access (DMA) controller
- Interrupt system
- Three programmable timers
- ROM subsystem
- RAM subsystem
- CMOS RAM subsystem and real time clock/calendar with battery backup
- Onboard parallel interface controller
- Embedded hard disk interface and one diskette drive interface
- Keyboard and auxiliary device controllers
- 1.44M floppy controller
- I/O ports
  - One parallel port
  - One PS/2-compatible mouse port
  - One PS/2-compatible keyboard port

**NOTE:** When Post executes a task, it uses a series of preset numbers called check points to be latched at port 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.

The following table describes the BIOS common tasks carried out by POST. Each task is denoted by an unique check point number. For other unique check point numbers that are not listed in the table, refer to the corresponding product service guide.

Post Checkpoints List: The list may vary accordingly depending on your BIOS

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| Checkpoint | Description |
|---|---|
| CFh | Test CMOS R/W functionality |
| C0h | Early chipset initialization:<br>-Disable shadow RAM<br>-Disable L2 cache (socket 7 or below)<br>-Program basic chipset registers |
| C1h | Detect memory<br>-Auto-detection of DRAM size, type and ECC.<br>-Auto-detection of L2 cache (socket 7 or below) |
| C3h | Expand compressed BIOS code to DRAM |
| C5h | Call chipset hook to copy BIOS back to E000 & F000 shadow RAM. |
| 01h | Expand the Xgroup codes locating in physical address 1000:0 |
| 02h | Reserved |

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| Checkpoint | Description |
|---|---|
| 03h | Initial Superio_Early _Init switch |
| 04h | Reserved |
| 05h | 1. Blank out screen<br>2. Clear CMOS error flag |
| 06h | Reserved |
| 07h | 1. Clear 8042 interface<br>2. Initialize 8042 self-test |
| 08h | 1. Test special keyboard controller for Winbond 977 series Super I/O chips.<br>2. Enable keyboard interface. |
| 09h | Reserved |
| 0Ah | 1. Disable PS/2 mouse interface (optional)<br>2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional).<br>3. Reset keyboard for Winbond 977 series Super I/Q chips. |
| 0Bh | Reserved |
| 0Ch | Reserved |
| 0Dh | Reserved |
| 0Eh | Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker. |
| 0Fh | Reserved |
| 10h | Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support. |
| 11h | Reserved |
| 12h | Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override. |
| 13h | Reserved |
| 14h | Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers. |
| 15h | Reserved |
| 16h | Initial Early_Init_Onboard_Generator switch. |
| 17h | Reserved |
| 18h | Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686) |
| 19h | Reserved |
| 1Ah | Reserved |
| 1Bh | Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR. |
| 1Ch | Reserved |
| 1Dh | Initial Early_PM_INIT switch. |
| 1Eh | Reserved |
| 1Fh | Load keyboard matrix (notebook platform) |
| 20h | Reserved |
| 21h | HPM initialization (notebook platform) |
| 22h | Reserved |

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| Checkpoint | Description |
|---|---|
| 23h | 1. Check validity of RTC value:<br>e.g. a value of 5Ah is an invalid value for RTC minute.<br>2. Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value<br>instead.<br>3. Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information.<br>4. Onboard clock generator initialization. Disable respective clock resource to empty PCI<br>& DIMM slots.<br>5. Early PCI initialization<br>-Enumerate PCI bus number<br>-Assign memory & I/O resource<br>-Search for a valid VGA device and VGA BIOS, and put it into C000:0 |
| 24h | Reserved |
| 25h | Reserved |
| 26h | Reserved |
| 27h | Initialize INT 09 buffer |
| 28h | Reserved |
| 29h | 1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address.<br>2. Initialize the APIC for Pentium class CPU.<br>3. Program early chipset according to CMOS setup. Example: onboard IDE controller.<br>4. Measure CPU speed.<br>5. Invoke video BIOS. |
| 2Ah | Reserved |
| 2Bh | Reserved |
| 2Ch | Reserved |
| 2Dh | 1. Initialize multi-language<br>2. Put information on screen display, including Award title, CPU type, CPU speed... |
| 2Eh | Reserved |
| 2Fh | Reserved |
| 30h | Reserved |
| 31h | Reserved |
| 32h | Reserved |
| 33h | Reset keyboard except Winbond 977 series Super I/O chips. |
| 34h | Reserved |
| 35h | Reserved |
| 36h | Reserved |
| 37h | Reserved |
| 38h | Reserved |
| 39h | Reserved |
| 3Ah | Reserved |
| 3Bh | Reserved |

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| Checkpoint | Description |
|---|---|
| 3Ch | Test 8254. |
| 3Dh | Reserved |
| 3Eh | Test 8259 interrupt mask bits for channel 1 |
| 3Fh | Reserved |
| 40h | Test 8259 interrupt mask bits for channel 2 |
| 41h | Reserved |
| 42h | Reserved |
| 43h | Test 8259 functionality |
| 44h | Reserved |
| 45h | Reserved |
| 46h | Reserved |
| 47h | Initialize EISA slot |
| 48h | Reserved |
| 49h | 1. Calculate total memory by testing the last double word of each 64K.<br>2. Program writes allocation for AMD K5 CPU. |
| 4Ah | Reserved |
| 4Bh | Reserved |
| 4Ch | Reserved |
| 4Dh | Reserved |
| 4Eh | 1. Program MTRR of M1 CPU.<br>2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range.<br>3. Initialize the APIC for P6 class CPU.<br>4. On MP platform, adjust the cacheable range to smaller one in case the cacheable<br>ranges between each CPU are not identical. |
| 4Fh | Reserved |
| 50h | Initialize USB |
| 51h | Reserved |
| 52h | Test all memory (clear all extended memory to 0) |
| 53h | Reserved |
| 54h | Reserved |
| 55h | Display number of processors (multi-processor platform) |
| 56h | Reserved |
| 57h | 1. Display PnP logo<br>2. Early ISA PnP initialization<br>-Assign CSN to every ISA PnP device. |
| 58h | Reserved |
| 59h | Initialize the combined Trend Anti-Virus code. |
| 5Ah | Reserved |
| 5Bh | (Optional Feature)<br>Show message for entering AWDFLASH.EXE from FDD (optional) |
| 5Ch | Reserved |

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| Checkpoint | Description |
|---|---|
| 5Dh | 1. Initialize Init_Onboard_Super_IO switch.<br>2. Initialize Init_Onboard_AUDIO switch. |
| 5Eh | Reserved |
| 5Fh | Reserved |
| 60h | Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility. |
| 61h | Reserved |
| 62h | Reserved |
| 63h | Reserved |
| 64h | Reserved |
| 65h | Initialize PS/2 Mouse |
| 66h | Reserved |
| 67h | Prepare memory size information for function call:<br>INT 15h ax=E820h |
| 68h | Reserved |
| 69h | Turn on L2 cache |
| 6Ah | Reserved |
| 6Bh | Program chipset registers according to items described in Setup& Auto-configuration table. |
| 6Ch | Reserved |
| 6Dh | 1. Assign resources to all ISA PnP devices.<br>2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to<br>“AUTO” |
| 6Eh | Reserved |
| 6Fh | 1. Initialize floppy controller<br>2. Set up floppy related fields in 40: hardware. |
| 70h | Reserved |
| 71h | Reserved |
| 72h | Reserved |
| 73h | (Optional Feature)<br>Enter AWDFLASH.EXE if:<br>-AWDFLASH is found in floppy drive<br>-ALT+F2 is pressed |
| 74h | Reserved |
| 75h | Detect & install all IDE devices: HDD, LS120, ZIP,CDROM..... |
| 76h | Reserved |
| 77h | Detect serial ports & parallel ports |
| 78h | Reserved |
| 79h | Reserved |
| 7Ah | Detect & install co-processor |
| 7Bh | Reserved |
| 7Ch | Reserved |
| 7Dh | Reserved |

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| Checkpoint | Description |
|---|---|
| 7Eh | Reserved |
| 7Fh | 1. Switch back to text mode if full screen logo is supported.<br>-If errors occur, report errors & wait for keys<br>-If no errors occur or F1 key is pressed to continue:<br>Clear EPA or customization logo. |
| 80h | Reserved |
| 81h | Reserved |
| 82h | 1. Call chipset power management hook.<br>2. Recover the text fond used by EPA logo (not for full screen logo)<br>3. If password is set, ask for password. |
| 83h | Save all data in stack back to CMOS. |
| 84h | Initialize ISA PnP boot devices. |
| 85h | 1. USB final Initialization<br>2. NET PC: Build SYSID structure<br>3. Switch screen back to text mode.<br>4. Set up ACPI table at top of memory.<br>5. Invoke ISA adapter ROMs.<br>6. Assign IRQs to PCI devices<br>7. Initialize APM<br>8. Clear noise of IRQs |
| 86h | Reserved |
| 87h | Reserved |
| 88h | Reserved |
| 89h | Reserved |
| 90h | Reserved |
| 91h | Reserved |
| 92h | Reserved |
| 93h | Read HDD boot sector information for Trend Anti-Virus code |
| 94h | 1. Enable L2 cache<br>2. Program boot up speed<br>3. Chipset final initialization<br>4. Power management final initialization<br>5. Clear screen & display summary table<br>6. Program K6 write allocation<br>7 Program P6 class write combining. |
| 95h | 1. Program daylight saving<br>2. Update keyboard LED & typematic rate |
| 96h | 1. Build MP table<br>2. Build & update ESCD<br>3. Set CMOS century to 20h or 19h<br>4. Load CMOS time into DOS timer tick<br>5. Build MSIRQ routing table |
| FFh | Boot attempt (INT 19h) |

# POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use “POST Error Messages List” to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in “Error Symptoms List” on page 66.

**NOTE:** When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

**NOTE:** Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a “system no-power” condition.

If you are unable to correct the problem by using the “BIOS Messages List” table and “Error Symptoms List” table, go to “Undetermined Problems”.

To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

| BIOS Messages | Action/FRU |
|---|---|
| BIOS ROM checksum error - System halted | The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Contact your system dealer to replace the BIOS. |
| CMOS Battery Failed | The CMOS battery is no longer functional. Contact your system dealer for a replacement the BIOS. |
| CMOS Checksum Error- defaults loaded | Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. A weak battery may have caused this error. Check the battery and replace if necessary. |
| CPU at nnnn | Displays the running speed of CPU. |
| Display switch is set incorrectly | The display switch on the motherboard can be set to either monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the Video selection. |
| Press ESC to skip memory test | The user may press Esc to skip the full memory test. |
| Floppy disk(s) fail | Cannot find or initialize the floppy drive controller or the drive. Make sure the controller is installed correctly, if no floppy drives are installed, be sure the Diskette Drive selection in Setup is set to NONE or AUTO. |
| HARD DISK initializing - Please wait a moment | Some hard drives require extra time to initialize. |
| HARD DISK INSTALL FAILURE | Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive Selection in Setup is set to NONE. |
| Hard disk(s) diagnosis fail | The system may run specific disk diagnostic routines. This message appears if one or more hard disks return an error when the diagnostics run. |

| BIOS Messages | Action/FRU |
|---|---|
| Keyboard Error Or No Keyboard Present | Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are pressed during POST. To purposely configure the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST. |
| Keyboard is locked out - Unlock the key | This message usually indicates that one or more keys have been pressed during the keyboard tests. Be sure no objects are resting on the keyboard. |
| Memory Test: | This message displays during a full memory test, counting down the memory areas being tested. |
| Memory test fail | If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error. |
| Override enabled - Defaults loaded | If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations. |
| Press TAB to show POST screen | System OEMs may replace the Phoenix Technologies Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display. |
| Primary master hard disk fail | POST detects an error in the primary master IDE hard drive. |
| Primary slave hard disk fail | POST detects an error in the secondary master IDE hard drive. |
| Secondary master hard disk fail | POST detects an error in the primary slave IDE hard drive. |
| Secondary slave hard disk fail | POST detects an error in the secondary slave IDE hard drive. |

# Error Symptoms List

**NOTE:** To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/ FRU listed in right column is the most likely cause.

| Error Symptom | Action/FRU |
|---|---|
| **Processor / Processor Fan** | |
| **NOTE:** Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems. | |
| Processor fan does not run but power supply fan runs. | 1. Ensure the system is not in power saving mode. See “Power Management” in chapter 2.<br>2. With the system power on, measure the voltage of processor fan connector. Its reading should be +12Vdc. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace a good fan.<br>3. Main board. |
| Processor test failed. | 1. Processor.<br>2. Main board. |
| **Main board and Memory** | |
| **NOTE:** Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems. | |
| Memory test failed. | 1. See "Memory"<br>2. Main board |
| Incorrect memory size shown or repeated during POST. | 1. Insert the memory modules in the DIMM sockets properly, then reboot the system.<br>2. Memory module.<br>3. Main board. |
| System works but fails to enter power saving mode when the `Power Management Mode` is set to `Enabled`. | 1. Enter BIOS Setup and load default settings. In Windows Systems, check settings in Power Management Property of Control Panel.<br>2. Reload software from Recovery CD. |
| Blinking cursor only; system does not work. | 1. Diskette/IDE drive connection/cables<br>2. Diskette/IDE disk drives<br>3. See “Undetermined Problems”.<br>4. Main board |
| **Diskette Drive** | |
| **NOTE:** Ensure the diskette drive is auto-setting in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.(If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.) | |
| Media and drive are mismatched. | 1. Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup.<br>2. Ensure the diskette drive is correctly formatted.<br>3. Diskette drive connection/cable<br>4. Diskette drive<br>5. Main board |
| Diskette drive does not work. | 1. Ensure the diskette drive is not set to `None` in the Disk Drives of BIOS Setup.<br>2. Diskette drive power<br>3. Diskette drive connection/cable<br>4. Diskette drive<br>5. Main board |

| Error Symptom | Action/FRU |
|---|---|
| Diskette drive read/write error. | 1. Diskette.<br>2. Diskette drive cable.<br>3. Diskette drive.<br>4. Main board. |
| Diskette drive LED comes on for more than 2 minutes when reading data. | 1. Diskette<br>2. Diskette drive connection/cable<br>3. Diskette drive<br>4. Main board |
| Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes. | 1. Diskette<br>2. Diskette drive power<br>3. Diskette drive connection/cable<br>4. Diskette drive<br>5. Main board |
| Diskette drive test failed. | 1. Diskette<br>2. Diskette drive<br>3. Diskette drive cable<br>4. Main board |
| **Hard Disk Drive** | |
| **NOTE:** Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.) | |
| Hard disk drive test failed. | 1. Enter BIOS Setup and Load default settings.<br>2. Hard disk drive cable.<br>3. Hard disk drive.<br>4. Main board. |
| Hard disk drive cannot format completely. | 1. Enter BIOS Setup and Load default settings.<br>2. Hard disk drive cable.<br>3. Hard disk drive.<br>4. Main board. |
| Hard disk drive has write error. | 1. Enter BIOS Setup and Load default settings.<br>2. Hard disk drive. |
| Hard disk drive LED fails to light, but system operates normally. | 1. With the system power on, measure the voltage of hard disk LED connector.<br>2. Hard drive LED cable. |
| **CD/DVD-ROM Drive** | |
| **NOTE:** Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems. | |
| CD/DVD-ROM drive LED doesn't come on but works normally. | 1. CD/DVD-ROM drive |
| CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off.<br><br>Software asks to reinstall disc.<br>Software displays a reading CD/DVD error. | 1. CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc.<br>2. CD/DVD-ROM is not inserted properly.<br>3. CD/DVD-ROM is damaged. |
| CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held. | 1. Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk.<br>2. CD/DVD-ROM drive power.<br>3. CD/DVD-ROM drive |

| Error Symptom | Action/FRU |
|---|---|
| CD/DVD-ROM drive does not read and there are no messages are displayed. | 1. CD may have dirt or foreign material on it. Check with a known good disc.<br>2. Ensure the CD/DVD-ROM driver is installed properly.<br>3. CD/DVD-ROM drive. |
| CD/DVD-ROM drive can play audio CD but no sound output. | 1. Ensure the headphone jack of the CD/DVD-ROM has an output.<br>2. Turn up the sound volume.<br>3. Speaker power/connection/cable.<br>4. CD/DVD-ROM drive. |
| **Real-Time Clock** | |
| Real-time clock is inaccurate. | 1. Ensure the information in the `Standard CMOS Feature` of BIOS Setup is set correctly.<br>2. RTC battery.<br>3. Main board |
| **Audio** | |
| Audio software program invokes but no sound comes from speakers. | 1. Speaker power/connection/cable. |
| **Modem** | |
| Modem ring cannot wake up system from suspend mode. | 1. For the External Modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled.<br>2. If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card.<br>3. In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax. |
| Data/fax modem software program invokes but cannot receive/send data/ fax | 1. Ensure the modem card is installed properly. |
| Fax/voice modem software program invokes but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.) | 1. Ensure the modem voice-in cable from modem adapter card to main board |
| **Video and Monitor** | |
| Video memory test failed.<br>Video adapter failed. | 1. Remove all non-factory-installed cards.<br>2. Load default settings (if screen is readable).<br>3. Main board |
| Display problem:<br>- Incorrect colors<br>No high intensity<br>Missing, broken, or incorrect characters<br>Blank monitor (dark)<br>Blank monitor (bright)<br>Distorted image<br>Unreadable monitor<br>Other monitor problems | 1. Monitor signal connection/cable.<br>2. Monitor<br>3. Video adapter card<br>4. Main board |
| Display changing colors. | 1. Monitor signal connection/cable<br>2. Monitor<br>3. Main board |

| Error Symptom | Action/FRU |
| --- | --- |
| Display problem not listed above (including blank or illegible monitor). | 1. “Monitor"<br>2. Load default settings (if screen is readable).<br>3. Main board |

| Error Symptom | Action/FRU |
|---|---|
| **Parallel/Serial Ports** | |
| Execute “Load BIOS Default Settings” in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems. | |
| Serial or parallel port loop-back test failed. | 1. Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup.<br>2. Loop-back.<br>3. Main board. |
| Printing failed. | 1. Ensure the printer driver is properly installed. Refer to the printer service manual.<br>2. Printer.<br>3. Printer cable.<br>4. Main board. |
| Printer problems. | 1. Refer to the service manual for the printer. |
| **Keyboard** | |
| Some or all keys on keyboard do not work. | 1. Keyboard |
| **Power Supply** | |
| Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.) | 1. Ensure the `Soft-off by PWR-BTTN.` in BIOS Setup of `Power Management` is not set to Instant-off.<br>2. Power switch cable assembly |
| Pressing power switch does not turn on the system. | 1. Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF.<br>2. Power switch cable assembly. |
| Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system). | 1. Load default settings.<br>2. Reload software from Recovery CD. |
| No system power, or power supply fan is not running. | 1. Power Supply<br>2. Main board |
| **Other Problems** | |
| Any other problems. | 1. Undetermined Problems |

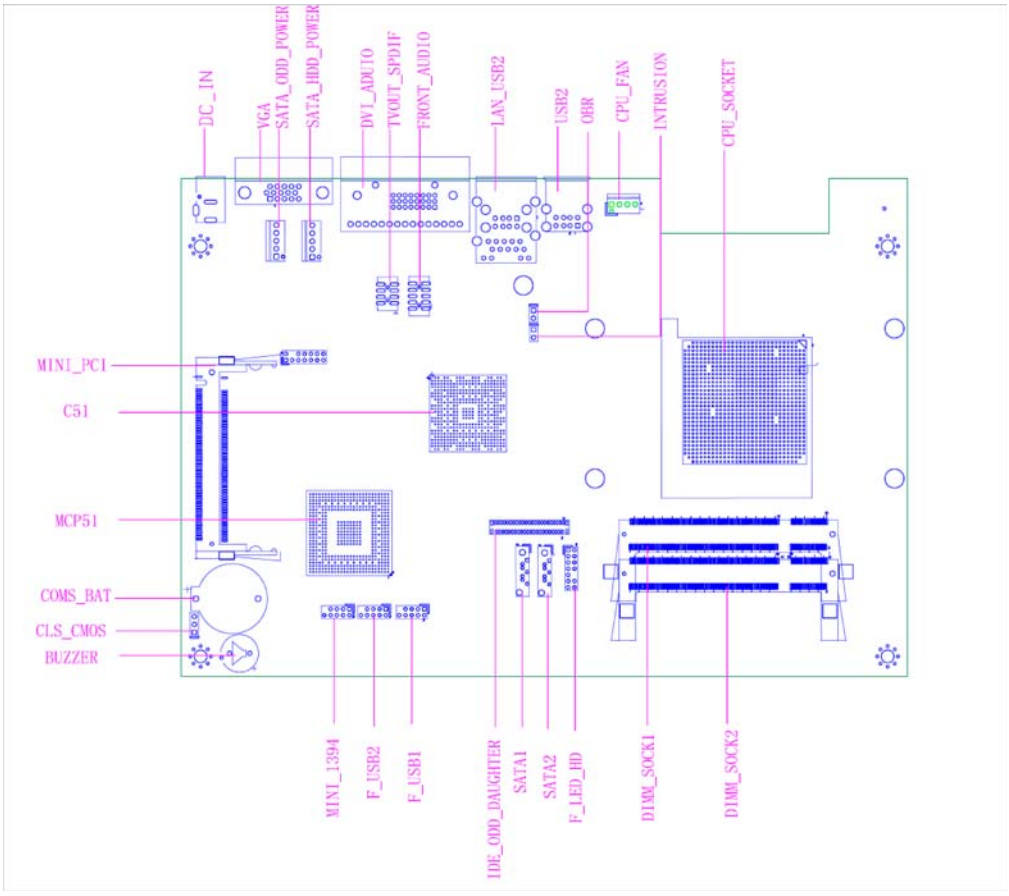
# Undetermined Problems

If an error message is present, go to “POST Error Messages List” on page 64. If you did not receive any messages, if the symptom is listed in “or “Error Symptoms List” on page 66. If you still cannot solve the problem, continue with this check:

1. Check the power supply voltages. If the voltages are correct continue with the following steps:
2. Power off the system unit.
3. Perform the following checks, one by one, until you have isolated the problem FRU.
4. Load default settings in setup.
5. Check all main board jumper positions and switch settings.
6. Check all adapter card jumper positions.
7. Check all device jumper positions.
8. Check all cables and connectors for proper installation.
9. If the jumpers, switches and voltage settings are correct, remove or disconnect the following, one at a time:
10. Non-Acer devices
    - External devices
    - Any adapter card (modem card, LAN card or video card, if installed)
    - CD/DVD-ROM drive
    - Diskette drive
    - Hard disk drive
    - DIMM
    - Processor
    - Main board
11. Power on the system unit.
12. Repeat steps 2 through 5 until you find the failing device or adapter.

# Jumper and Connector Information

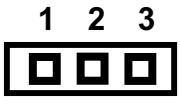
## Main Board Layout




| | | | | | |
|---|---|---|---|---|---|
| 1 | DC_IN | DC IN Connector | 15 | C51 | Nvidia C51 NorthBridge |
| 2 | VGA | VGA Connector | 16 | MCP51 | Nvidia MCP51 SouthBridge |
| 3 | SATA_ODD_POWER | SATA ODD power Header | 17 | COMS_BAT | COMS Battery Holder |
| 4 | SATA_HDD_POWER | SATA HDD power Header | 18 | CLS_CMOS | Clear COMS Header |
| 5 | DVI_ADUIO | DVI and Audio Connector | 19 | BUZZER | System BUZZER |
| 6 | TVOUT_SPDIF | TV OUT and SPDIF Header | 20 | MINI_1394 | Mini-1394 Header |
| 7 | FRONT_AUDIO | Front Audio Header | 21 | F_USB2 | Front USB*2 Header |
| 8 | LAN_USB2 | LAN and USB*2 Conncetor | 22 | F_USB2 | Front USB*2 Header |
| 9 | USB2 | USB*2 Connector | 23 | IDE_ODD_DAUGHTER | IDE ODD Connector |
| 10 | OBR | One Bottom Recovery header | 24 | SATA1 | SATA Header |
| 11 | CPU_FAN | CPU Fan Connector | 25 | SATA2 | SATA Header |

| | | | | | |
|---|---|---|---|---|---|
| 12 | INTRUSION | Case Open header | 26 | F_LED_HD | Front LED Panel Header |
| 13 | CPU_SOCKET | AMD M-2 CPU Socket | 27 | DIMM_SOCK1 | DIMM_SOCK1 |
| 14 | MINI_PCI | Mini-PCI Connector | 28 | DIMM_SOCK2 | DIMM_SOCK2 |

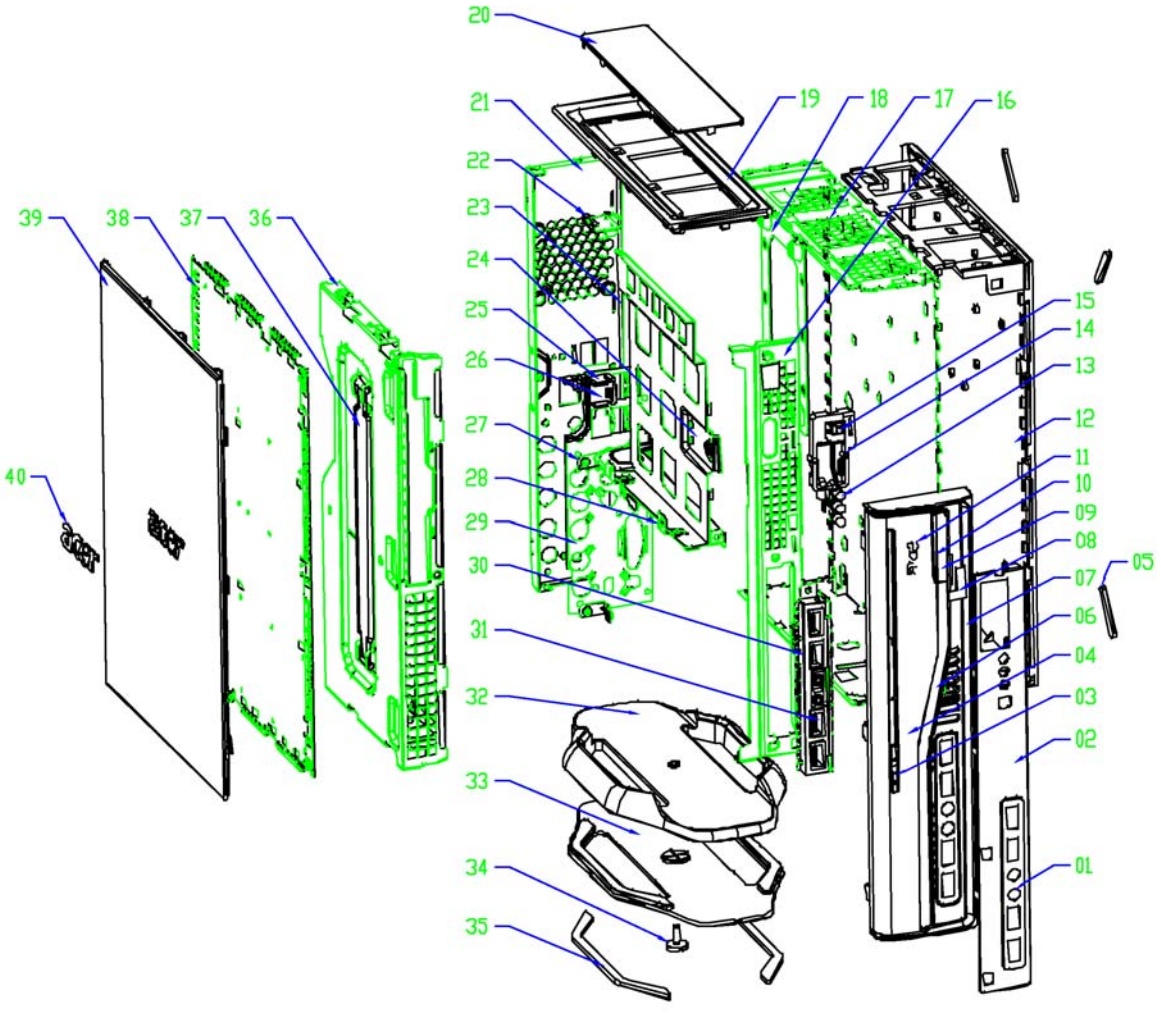
**CMOS Jumper (JCMOS1) Settings**

| Jumper | Symbol | Description | Function |
|---|---|---|---|
|  | | 1-2 closed | Clear CMOS |
| | | 2-3 closed | Normal (Default) |

# FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Aspire L100. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

# Exploded Diagram




| Item | Description | Item | Description |
|---|---|---|---|
| 1 | USB Mylar | 21 | Back to one Fan |
| 2 | FAN Cover | 22 | Cotruscon Bracket |
| 3 | Button | 23 | ODD Bracket-02 |
| 4 | Bezel Cover | 24 | Sheetmetal-HDD-Clip |
| 5 | Foot U Base | 25 | OBR Holder |
| 6 | Bezel Mylar | 26 | OBR PCB |
| 7 | Bezel | 27 | Daughter Board |
| 8 | Lens Mylar | 28 | ODD Bracket-03 |
| 9 | Lens | 29 | Sheetmetal- IO |
| 10 | Power Mylar | 30 | Sheetmetal USB BOX |
| 11 | Acer Logo | 31 | USB PCB |

| Item | Description | Item | Description |
|---|---|---|---|
| 12 | U Base | 32 | Pesdestal |
| 13 | LED | 33 | Pedestal Cover |
| 14 | Switch Holder | 34 | Pedestal Screw |
| 15 | Power Switch | 35 | Foot Pedestal |
| 16 | Front | 36 | ODD Bracket |
| 17 | Bottom Shield | 37 | HD Bracket Handle |
| 18 | Main Board Support | 38 | Top Shcclo |
| 19 | SIDC Cover | 39 | Top Cover |
| 20 | VENT Cover | 40 | Acer Logo |

# Parts

**NOTE:** Please note WHEN ORDERING FRU PARTS you should check the most up-to-date information available on your regional web or channel (http://aicsl.acer.com.tw/spl/, if you do not own a specific account, you can still access the system with guest; guest). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

**NOTE:** To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.